ADF&G TECHNICAL DATA REPORT NO. 38
(Limited Distribution)

STATE OF ALASKA
Jay S. Hammond, Governor

PACIFIC HERRING (Clupea pallasii) HARVEST STATISTICS AND A SUMMARY OF HYDROACOUSTICAL SURVEYS CONDUCTED IN SOUTHEASTERN ALASKA DURING THE FALL, WINTER AND SPRING, 1976-77

By:
Dennis Blankenbeckler

1978

ALASKA DEPARTMENT OF FISH AND GAME
Subport Building, Juneau, Alaska 99801

Ronald O. Skoog
Commissioner

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Data presented in these reports is intended to be final, however, some revisions may occasionally be necessary. Minor revision will be made via errata sheets. Major revisions will be made in the form of revised reports.

PACIFIC HERRING (*Clupea pallasii*) HARVEST STATISTICS AND A SUMMARY OF HYDROACOUSTICAL SURVEYS CONDUCTED IN SOUTHEASTERN ALASKA DURING THE FALL, WINTER AND SPRING, 1976-77

By

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INTRODUCTION

This report discusses the harvest statistics and hydroacoustical surveys conducted on Pacific herring, Clupea pallasii, in Southeastern Alaska during the 1976-77 season. Statistical fishing areas are shown in Figure 1.

HARVEST

Approximately 17 million pounds of herring were landed in the sac roe and winter bait and food fisheries in Southeastern Alaska with an approximate value to the fisherman of 1.3 million dollars. A total of 12.6 million pounds was landed as winter bait and food, and 5.1 million pounds was landed for sac roe. A total of 118.7 million pounds of adult herring was assessed as present in Southeastern waters with a resulting 14.9% harvest. This includes only major stocks and does not account for small, discrete stocks found in most all Southeastern bays. A summary of Southeastern Alaska herring harvests are shown in Table 1.

Southeastern Alaska herring fisheries are managed for separate stocks on a quota basis by emergency regulations. The quotas are based on harvesting a percentage (10-20%) of each major stock as determined from available data on total biomass, and age and growth analysis. Biomass estimates, quotas and harvest data are summarized for bait and sac roe areas in Tables 2 and 3.

Forty purse seiners, 80 set gillnetters and three herring pounds participated in the herring fishery.

The bait and food fishery is harvested by purse seines and herring pounds. Herring pounds are regulated under a permit system with quotas set by the Board of Fisheries. The sac roe fishery is harvested by purse seines and set gillnets.

The 1977 roe season marked the second year that significant catches of gillnet herring were harvested. Separate areas were established for set gillnet and purse seine fishing with pound fishing managed under the permit system. A total of 5.1 million pounds of roe herring was harvested in 1977 in Southeastern. Gillnets accounted for 44.2% and purse seines for 55.8% of the harvest. The composition of males, the number of spawn-outs and the catch rate varied in the gillnet fisheries.

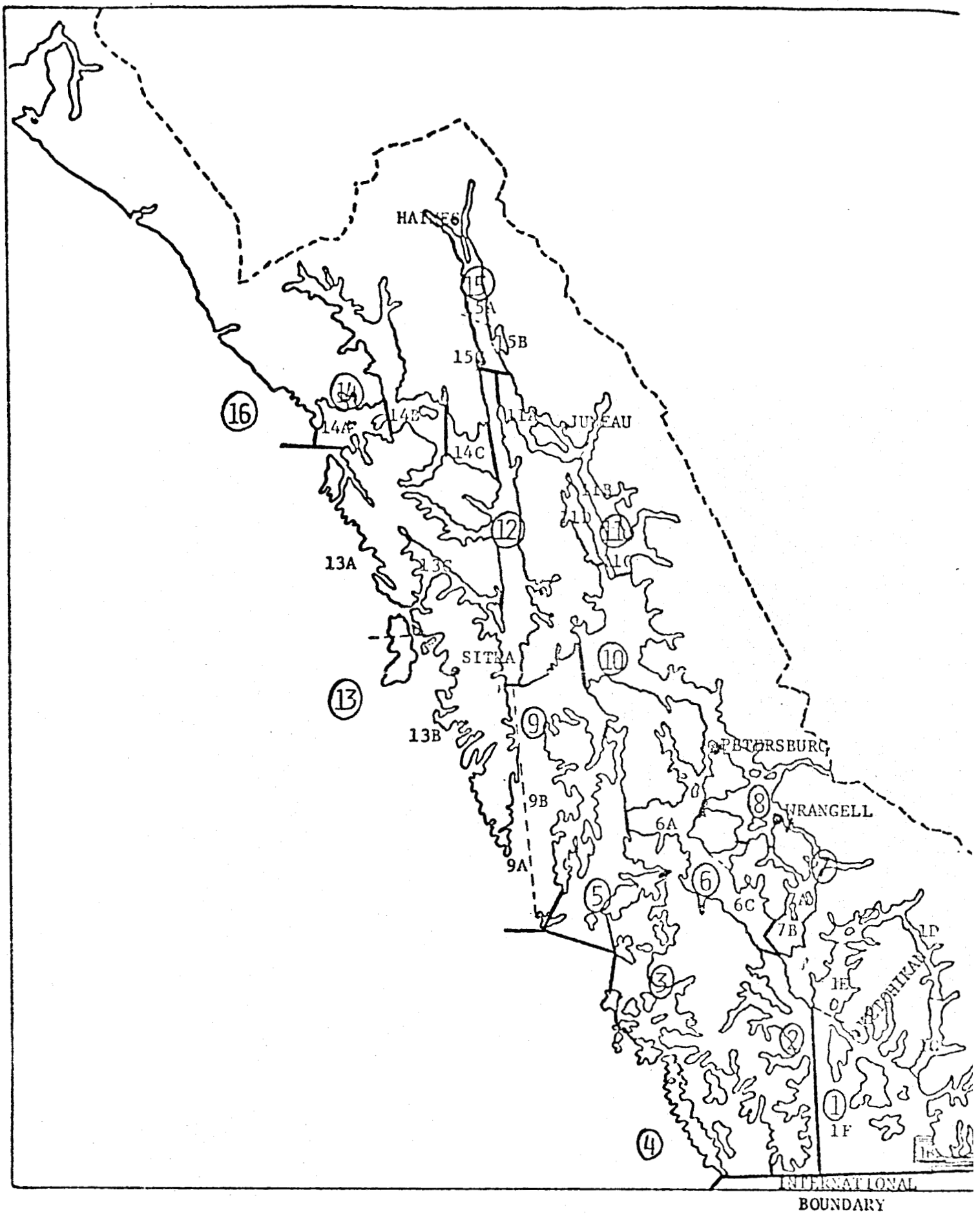

Fig. 1. Statistical fishing areas - Southeastern Alaska.

Table 1. Southeastern Alaska herring catches in pounds x 1000, 1900-1976.

Year*	Total Catch	Year	Total Catch
1900	2,388	1941	12,460
1901	2,500	1942	7,382
1902	1,624	1943	12,470
1903	2,988	1944	33,602
1904	3,042	1945	48,252
1905	2,618	1946	75,128
1906	2,010	1947	83,658
1907	2,764	1948	32,250
1908	3,422	1949	28,558
1909	2,150	1950	26,822
1910	13,734	1951	21,304
1911	24,114	1952	32,040
1912	32,134	1953	24,870
1913	26,992	1954	12,892
1914	16,636	1955	22,736
1915	13,928	1956	45,638
1916	22,388	1957	49,490
1917	24,890	1958	77,594
1918	35,650	1959	99,732
1919	21,924	1960	77,812
1920	32,904	1961	49,418
1921	12,024	1962	33,874
1922	33,900	1963	31,212
1923	42,480	1964	46,698
1924	58,790	1965	24,318
1925	115,564	1966	10,680
1926	147,686	1967	6,050
1927	90,620	1968	3,632
1928	106,014	1969	7,364
1929	157,498	1970	6,648
1930	141,710	1971	5,984
1931	89,714	1972	9,498
1932	99,572	1973	11,773
1933	123,176	1974	16,242
1934	133,684	1975	15,540
1935	116,310	1976	17,770
1936	73,426		
1937	100,668		
1938	44,712		
1939	40,056		
1940	6,274		

* Catch would include total season although referenced as only one year. Example: 1976 year would include 1976-77 seasons catch.

Table 2. Summary of bait and food herring fisheries in Southeastern Alaska, 1976-77.

Fishing District	Area	Biomass[1] Estimate 10^6 lbs.	Quota in % Biomass Estimate	Harvest millions of pounds	% of Biomass Estimate Harvested
1	Ham Island[2]	-	10-20	0.11	-
	Carroll In.	0.4		-	-
	George In.	4.92		0.72	14.6
	Tongass Nar.	2.49[3]		0.71	28.5
	Behm Narrows	3.50[4]		0.32	9.1
	Thorne Arm	2.00[4]		0.41	20.5
	Bold Island	1.5 [4]		0.20	13.3
	Fitzgibbon Co.	-		0.08	-
3	Boca de Finas	3.37		0.97	28.8
	Trocadero Bay	-		0.27	-
	El Capitan	-		0.27	-
	Sea Otter Snd.	-		0.47	-
	Port Alice	-		0.19	-
4	Sea Otter Hbr.	-		0.13	-
6	Scow Bay	4.4		-	-
7	Deer Island	8.7[3]		1.59	18.3
	Anita Bay	10.7[3]		1.45	13.6
	Fools Inlet	.8		0.22	27.5
9	Port Camden	10.6		1.90	18.0
	Tebenkof Bay	-		0.09	-
10	Pt. Houghton	-		0.08	-
	Farragut Bay	-		0.03	-
12	Tenakee Inlet	-		0.26	-
	Favorite Bay	6.97[3]		0.12	2.0
	Hood Bay	3.70[3]		-	-
13	Lisianski In.	7.85		1.16	14.8
	Hoonah Sound	-		0.42	-
	Portlock Hbr.	-		0.08	-
14	Idaho Inlet	-		0.20	-
	Port Althorp	-		0.17	-
	TOTAL	71.9		12.62	17.5

0 to 28.8% range

1/ Biomass estimate catch to date of survey plus computer estimate.
2/ Annette Island Reservation landing.
3/ Series of surveys averaged to determine biomass estimate.
4/ Biomass estimate determined visually from echogram.

Table 3. Summary of sac roe herring fisheries in Southeastern Alaska, 1976-77.

Fishing District	Location	Biomass Estimate 10^6 lbs.	Harvest millions of pounds	% of Biomass Estimate Harvested	Gear[1/] Type
1	Boca de Quadra	12.69[1/]	1.66	13.1	SGN
	Annette Island[2/]	-	0.635	-	SGN & PS
2	Kasaan Bay	1.0	-	-	-
11A	Auke Bay		0.44		SGN
		13.6	1.42		PS
11D	Seymour Canal	8.23	0.96	11.7	PS
13B	Sitka Sound	11.3	-	-	-
	TOTAL	46.82	5.11	10.91	

[1/]Set Gillnet = SGN
Purse Seine = PS

[2/]Annette Island Reservation landing.

All roe fisheries, as in past years, were of short duration (hours). Market conditions reflected unlimited bait, food fish and sac roe demands for 1976-77.

HYDROACOUSTICAL SURVEYS

Hydroacoustical survey results for 1976-77 are summarized in Table 4 and Table 5 presents a summary of assessments from 1970-1977. Individual surveys are described in Appendix Table 1. Acoustical equipment and computer analysis are described by Nunnalle (1974) and Moberly and Thorne (1974). Operation and calibration of equipment is described by Mattie (1975) and Blankenbeckler (1976).

Equipment used for assessment was similar to 1976. A field calibration unit developed by the Applied Physics Laboratory, University of Washington, was utilized for the first time with success in 1977. The unit consists of a cage attached to the vessel's acoustical equipment transducer. The unit is designed to generate and record known electrical signals in and out of the transducer. Past calibration, similar in accuracy to this system, could only be conducted at the University of Washington under laboratory conditions. The new system has the advantage of checking the entire system under field conditions and at routine time intervals. The time frame for calibrating an acoustical system is 2 to 3 hours. This calibration system allows the biologist to field check the transmitting and receiving responses of the system to allow for correction for any changes caused by the electrical components.

Survey design was similar to 1976 except that emphasis was placed on assessing small, dense schools. By making repeated surveys and averaging runs, smaller areas of dense herring concentrations were assessed (individual schools in some instances).

Considerably more effort in 1976-77 resulted in an increased number of surveys. Seventy-six surveys were computer analyzed compared to 44 in 1975-76. Increased effort in recent years should be taken into consideration when comparing annual biomass estimate results. The bottleneck in collecting surveys for management decisions in 1976-77 was the continual breakdown of Department vessels and lack of sufficient vessel personnel.

Analysis of data to compute biomass is conducted under contract by the Fisheries Research Institute, University of Washington, using a computer digital data analysis system and, on limited occasions, by visual estimates from echograms by an experienced observer. Visual estimates resulted in

Table 4. Summary of herring computer hydroacoustical estimates made in Southeastern Alaska during 1976-77.

Date	Location	Survey Number	Vessel	Computer Ave. Density lbs/m^2	Surveyed Area (m^2)	Biomass 10^6 lbs.
1976						
10-11	Pt. Camden	1	AUKLET	.40	3,418,784	1.3
10-28	" "	1	"	1.30	8,184,362	10.6
10-28	" "	2	"	.80	7,096,567	5.7
11-17	George Inlet	1	"	1.80	643,107	1.2
11-17	" "	2	"	5.70	643,107	3.6
11-18	Tongass Narrows	1	"	1.40	1,286,214	1.8
11-18	" "	2	"	1.40	1,286,214	1.8
11-19	Carroll Inlet	1	"	.35	1,146,874	.4
11-20	George Inlet	1	"	4.20	481,630	2.0
11-20	" "	2	"	3.20	481,630	1.5
11-21	Lisianski In.	1	KITTIWAKE	.10	4,233,787	.4
11-21	" "	2	"	.04	5,487,846	.2
11-21	Stag Bay	1	"	1.13	1,918,602	2.2
11-22	Tongass Narrows	1	AUKLET	1.80	943,224	1.7
11-22	" "	2	"	2.30	943,224	2.2
11-26	Deer Island	1	"	3.80	2,786,797	10.6
11-27	" "	1	"	3.40	1,800,699	6.1
11-27	" "	2	"	7.60	1,500,583	11.4
11-28	Anita Bay	1	"	.96	9,775,226	9.8
11-28	" "	2	"	1.03	9,903,847	10.2
12-10	Lisianski Straits	1	"	3.30	1,179,029	3.9
12-27	Fritz Cove	2	NMFS	3.47	3,922,952	13.6
12-29	Pt. Camden	1	AUKLET	.96	4,247,580	4.1
1977						
1-4	Anita Bay	1	AUKLET	.14	8,703,381	1.2
1-5	Fritz Cove	1	NMFS	4.90	2,057,942	10.1
1-6	George Inlet	1	AUKLET	2.33	321,553	.75
1-6	" "	2	"	13.06	321,553	4.2
1-10	Fritz Cove	1	NMFS	2.20	2,454,525	5.4
1-11	" "	1	"	1.70	2,315,185	3.9
1-11	" "	2	"	1.80	2,861,826	5.2
1-11	" "	3	"	2.50	2,626,020	6.6
1-17	Deer Island	4	AUKLET	4.90	330,000	1.6
1-17	" "	5	"	8.00	536,000	4.3
1-17	" "	6	"	5.50	619,000	3.4
1-18	" "	3	"	3.40	1,362,000	4.7
1-18	" "	4	"	3.70	1,032,000	3.8
1-18	Fritz Cove	1	NMFS	3.20	3,504,933	11.2
1-19	Deer Island	2	AUKLET	4.90	867,000	4.2
1-20	Hood Bay	1	NMFS	.10	2,244,175	.22
1-21	Bocas de Finas	1	KITTIWAKE	.35	5,380,662	1.9
1-21	" " "	2	KITTIWAKE	.44	5,380,662	2.4
1-26	Fools Inlet	1	AUKLET	.44	1,929,321	.8

Table 4. (continued)

Date	Location	Survey Number	Vessel	Computer Ave. Density lb./m^2	Surveyed Area (m^2)	Biomass 10^6 lbs.
1-27	Lisianski Straits	1	SUNDANCE	5.60	1,050,408	5.9
1-27	" "	2	"	8.60	1,050,408	9.0
1-27	Deer Island	1	AUKLET	9.10	428,738	3.9
1-27	" "	2	"	1.10	728,854	.8
1-28	Hood Bay	1	KITTIWAKE	7.30	696,699	5.1
1-28	" "	2	"	4.86	696,699	3.4
1-28	" "	3	"	3.71	696,699	2.6
1-29	Katlian	1	SUNDANCE	1.10	1,714,952	1.9
1-30	Bocas de Finas	1	NMFS	.14	11,340,120	1.6
1-30	" " "	2	NMFS	.20	8,070,992	1.6
1-30	Favorite Bay	1	KITTIWAKE	28.90	167,475	4.8
1-30	" "	2	"	38.50	167,475	6.4
1-30	" "	3	"	26.30	301,456	7.9
2-14	Pt. Camden	2	AUKLET	1.26	1,093,281	1.4
2-17	Scow Bay	1	"	1.72	2,644,775	4.5
3-2	Kasaan Bay	1	SUNDANCE	.31	1,479,146	.5
3-8	Katlian Bay	1	KITTIWAKE	2.70	4,223,069	11.3
3-9	" "	1	"	1.90	3,676,428	7.0
3-10	Kasaan Bay	1	SUNDANCE	.40	2,358,059	.9
3-10	" "	2	"	.13	2,165,126	.3
4-1	Old Sitka Rocks	1	AUKLET	.42	6,002,332	2.5
4-1	" " "	2	"	2.00	5,402,099	10.8
4-6	" " "	1	KITTIWAKE	1.10	4,523,186	5.0
4-7	" " "	1	"	1.70	3,395,749	5.8
4-7	" " "	2	AUKLET	3.10	3,395,749	10.5
4-11	Kasaan Bay	1	SUNDANCE	.04	3,387,030	.1
4-11	" "	2	"	.02	3,537,088	.06
4-28	Seymour Canal	1	AUKLET	1.91	643,107	1.2
4-28	" "	2	"	1.01	643,107	.6
4-28	" "	3	"	.26	500,780	.1
4-29	" "	1	"	1.81	4,051,570	7.3
4-30	" "	1	"	2.66	2,448,344	6.5
4-30	" "	2	"	1.74	3,305,760	5.8
5-1	" "	1	"	.79	2,239,901	1.8

Table 5. Summary of computer acoustical assessments in Southeastern Alaska, 1970-1977, in millions of pounds.

Fishing District	Area	Start of Systematic Surveying		Gear Development Stage, no Systematic Survey Scheme				
		'77-'76	'76-'75	'75-'74	'74-'73	'73-'72	'72-'71	'71-'70
1	Ham Island	-	3.80	-	-	-	-	-
	George Inlet	4.92	2.90	8.33	5.28	1.10	-	-
	Carroll Inlet	.40	-	.72	.91	10.30	16.20	-
	Tongass Narr.	2.49	1.30	-	-	-	-	-
	Ward Cove	-	-	.04	.38	.60	.60	
2	Kasaan Bay	1.00	4.10	-	-	-	-	-
	Moira Sound	-	-	-	-	-	-	.36
	TwelveMile Arm	-	-	-	-	-	-	.16
3	Boca de Finas	3.37	14.80	.60	-	36.40	-	-
	El Capitan	-	1.00	-	-	-	-	2.10
	Shakan St.	-	-	-	-	-	-	.97
	Sukkwan St.	-	-	-	-	-	-	.70
	Klakas Inlet	-	-	-	-	-	-	.35
6	Scow Bay	4.50	4.20	.40	.50	.14	32.20	-
7	Deer Island	8.70	5.80	.80	.90	7.32	26.20	-
	Anita Bay	10.70	16.10	1.40	.20	.36	-	.46
	Fools Inlet	.80	-	-	-	-	-	-
9	Port Camden	10.60	3.30	6.30	1.20	-	-	-
10	Port Houghton	-	-	-	.68	-	-	-
11	Auke Bay	13.60	10.80	14.90	9.20	5.90	24.90	-
	Seymour Canal	8.23	-	.79	1.80	1.00	.94	-
12	Favorite Bay	6.97	-	-	-	-	-	-
	Hood Bay	3.70	-	-	-	-	-	-
13	Sitka Sound	11.30	14.60	12.80	2.00	20.00	14.40	-
	Nakwasina	-	-	4.50	1.40	-	-	-
	Slocum Inlet	-	-	-	.88	-	-	-
	Lisianski In.	7.85	4.70	1.60	11.00	.40	.40	.20
	TOTALS	99.13	87.40	53.18	36.33	83.52	115.84	5.30

biomass accuracy averaging plus of minus 50% when compared to follow-up computer analysis. Visual estimates with a high degree of accuracy resulted only when the observer was utilizing acoustical equipment which has remained unchanged of a period of time and the gain (sensitivity) was set comparable to past surveys. Accurate visual estimates were made from the R/V AUKLET at gains five and six. Comparison of visual vs computer estimates is summarized in Table 6.

ACKNOWLEDGMENTS

The author wishes to express thanks to Tom Copeland, William Bergmann and other Commercial Fisheries Division management biologists in Southeastern Alaska for assistance in collection of the hydroacoustical data. Thanks is also extended to the crews of the research vessels, KITTIWAKE, AUKLET, SUNDANCE, JOHN COBB and SEARCHER for collection of acoustical data and to Gary Gunstrom and Sharon Peterson for assistance in preparation of this report. Thanks is also extended to the National Marine Fisheries Service, Auke Bay Laboratory, in collection of hydroacoustical data by their staff provided under a cooperative agreement between the agencies.

Table 6. Summary of visual estimates compared to computer estimates from R/V AUKLET at sensitivity settings at 4.0-6.0 during 1976-77 in Southeastern Alaska.

Survey	Visual	Computer	Percent Error
1	2.5	5.7	- 56%
2	2.5	1.9	+ 32%
3	2.5	4.3	- 42%
4	3.5	2.3	+ 52%
5	3.5	2.3	+ 52%
6	1.0	0.4	+150%
7	2.5	2.7	- 7%
8	2.5	2.2	+ 14%
9	4.5	2.4	+ 88%
10	4.5	2.9	+ 55%
11	0.5	1.3	- 62%
12	5.0	6.5	- 23%
13	10.0	10.15	- 2%
14	10.0	10.55	- 5%
15	3.5	5.5	- 36%
16	4.1	6.1	- 33%
17	4.0	6.0	- 33%
18	3.5	1.7	+106%
19	.75	1.47	- 42%
20	2.5	4.9	- 49%
21	3.5	1.6	+119%
22	3.0	4.3	- 30%
23	3.5	3.4	+ 3%
24	4.0	4.7	- 15%
25	5.0	3.8	+ 32%
26	4.5	4.2	+ 7%
27	3.5	3.9	- 10%
28	3.5	0.8	+338%
29	1.0	0.8	+ 25%
TOTAL	104.85	108.77	- 4%

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APPENDIX

ACOUSTICAL SURVEY FORM

AREA Tongass Narrows Run# 1

Date 11-18-76 Vessel AUKLET

Operators Blankenbeckler Tide Stage flooding

GENERAL INFORMATION: Tape index 0000 → 0014

1/ Calibration tone side #1 - Tape index 0014 → 0056 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0056 @ Gain 5.0

Log time of survey: Start 1339 End 1443 Total 64 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP

Tape reversed @ 1024 on tape index

Taping of run ended @ 0676 on tape index

Calibration tone side #2 - Tape index 0676 → 0651 @ Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

Started run at Saxman Bay. Bird activity delineated schools. Herring distributed for assessment during daylight hours. Sets being made with commercial seiners.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

ACOUSTICAL SURVEY FORM

AREA Tongass Narrows Run# 2

Date 11-18-76 Vessel AUKLET

Operators Blankenbeckler Tide Stage Flood

GENERAL INFORMATION: Tape index 0000 → 0011

1/ Calibration tone side #1 - Tape index 0011 → 0056 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0056 @ Gain 5.0

Log time of survey: Start 1455 End 1550 Total 55 min.

Attenuated @ -12db. Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration oc. setting 500 mv Transmit pulse 220 VPP

Tape reversed @ 1039 on tape index

Taping of run ended @ 0923 on tape index

Calibration tone side #2 - Tape index 0923 → 0903 @ Gain 5.0

_____ → _____ _____

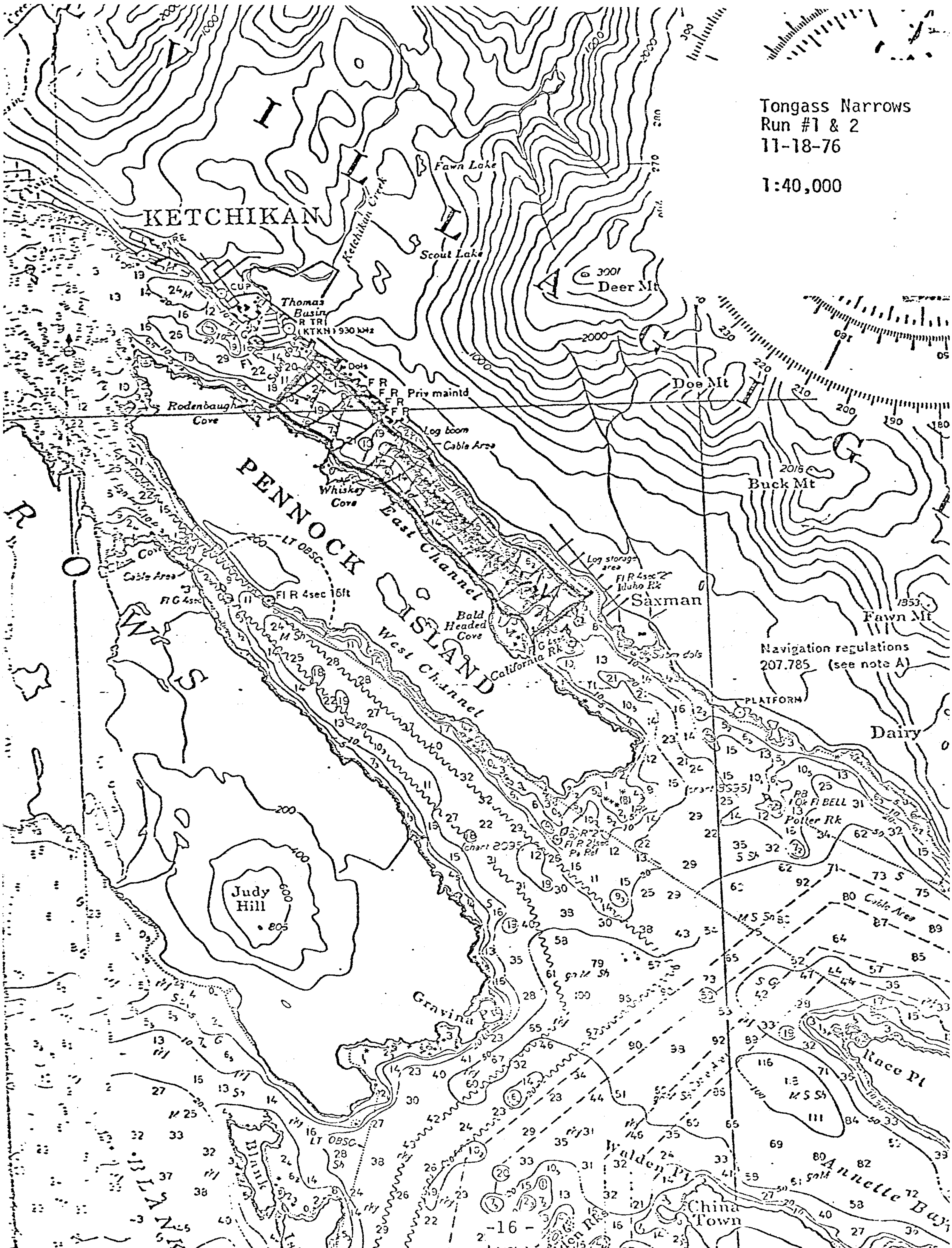
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Started run near New England Fish Co. Heaviest herring concentrations from Todds down to Saxman bouys. Visual estimate 3-4 million pounds. Herring distributed in large school and at low constant density. Best survey time during daylight hours.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Tongass Narrows
Run #1 & 2
11-18-76
1:40,000
KETCHIKAN
Ketchikan Creek
Fawn Lake
Scout Lake
Deer Mt
Doe Mt
Buck Mt
Fawn Mt
Thomas Basin
Rodenbaugh Cove
Whiskey Cove
PENNOCK ISLAND
East Channel
West Channel
Bald Headed Cove
California Rk
Idaho Rk
Saxman
Log boom
Cable Area
Log storage area
Priv maintd
Navigation regulations 207.785 (see note A)
PLATFORM
Dairy
Potter Rk
Judy Hill
Gravina Pt
Race Pt
Walden Pt
China Town
Annette Bay
Blank
LT OBSC
Fl R 4sec 16ft

ACOUSTICAL SURVEY FORM

AREA Tongass Narrows Run# 1 & 2

Date 11-22-76 Vessel AUKLET

Operators Blankenbeckler Tide Stage ebbing

GENERAL INFORMATION: Tape index 0000 → 0024

1/ Calibration tone side #1 - Tape index #1 0024 → 0066 Gain 5.5

#2 1045 → 1026 5.5

____ → ____

____ → ____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index #1 0070, #2 0990 @ Gain 5.5

Log time of survey: Start #1 1422, #2 1505 End 1504 1552 Total 42 min. 47 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP

Tape reversed @ 1055 on tape index

Taping of run ended @ #1 0989, #2 0105 on tape index

Calibration tone side #2 - Tape index ____ → ____ @ Gain ____

____ → ____

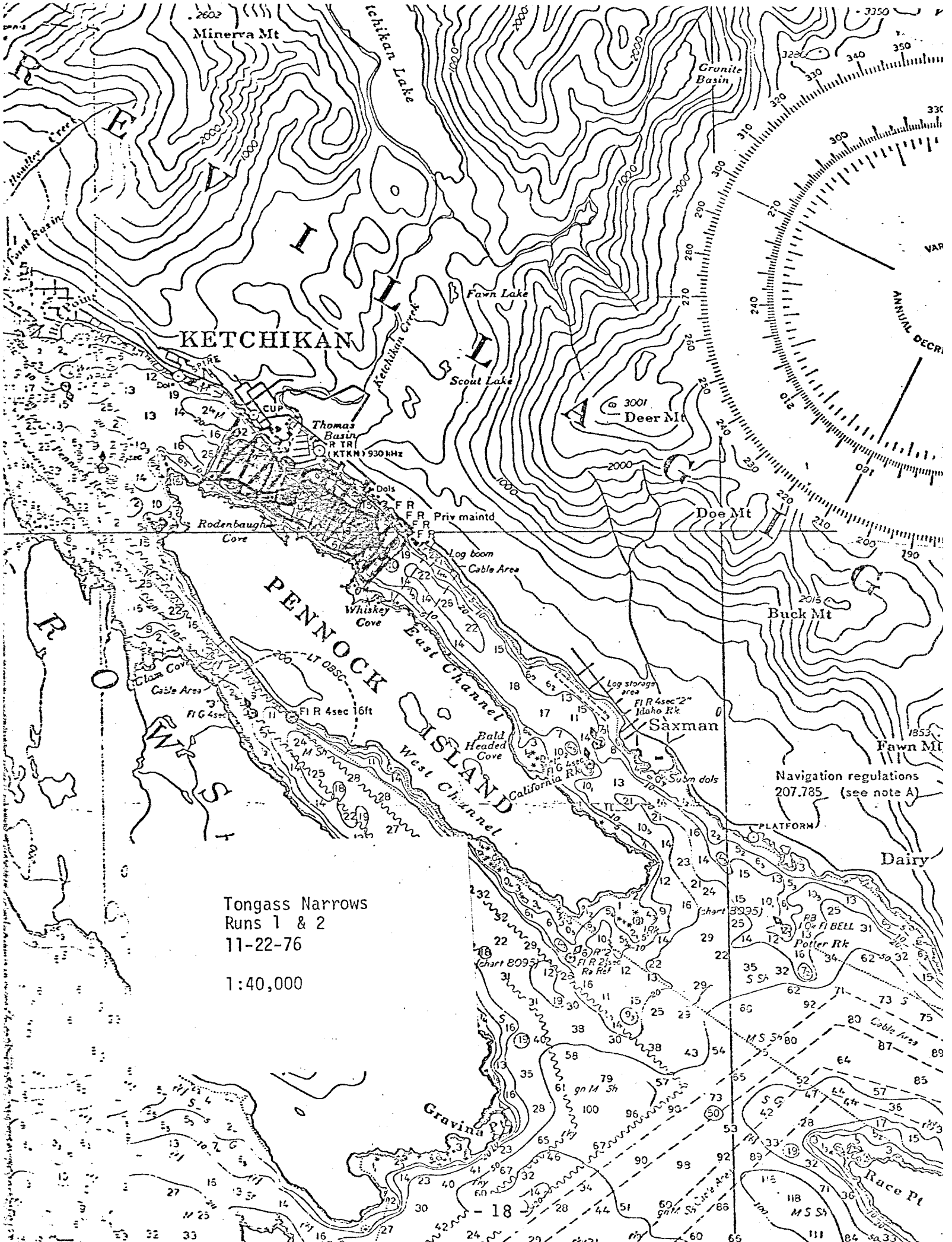
____ → ____

____ → ____

COMMENTS:

Fish well off the bottom. Birds present. Herring further up channel than first surveys.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Minerva Mt
Ketchikan Lake
Granite Basin
Fawn Lake
KETCHIKAN
Ketchikan Creek
Scout Lake
Deer Mt
Thomas Basin
R TR
(KTKN) 930 kHz
CUP
Dols
F R
Priv maintd
Rodenbaugh Cove
Log boom
Cable Area
Whiskey Cove
PENNOCK ISLAND
East Channel
West Channel
Doe Mt
Buck Mt
Log storage area
Fl R 4sec "2"
Idaho Rk
Saxman
Bald Headed Cove
Fl G 4sec
California Rk
Subm dols
Fawn Mt
Navigation regulations
207.785 (see note A)
PLATFORM
Dairy
LT OBSC
Fl G 4sec
Fl R 4sec 16ft
Fl R 2½sec
Ro Ref
Potter Rk
Cable Area
Gravina Pt
Race Pt
Tongass Narrows
Runs 1 & 2
11-22-76
1:40,000

ACOUSTICAL SURVEY FORM

AREA Carroll Inlet Run# 1

Date 11-19-76 Vessel AUKLET

Operators Blankenbeckler, Griffin Tide Stage ebb

GENERAL INFORMATION: Tape index 0336 → 0360

1/ Calibration tone side #1 - Tape index 0360 → 0386 Gain 6.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0386 @ Gain 6.0

Log time of survey: Start 1635 End 1745 Total 70 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP

Tape reversed @ 1026 on tape index

Taping of run ended @ 0297 on tape index

Calibration tone side #2 - Tape index 0295 → 0265 @ Gain 6.0

_____ → _____ _____

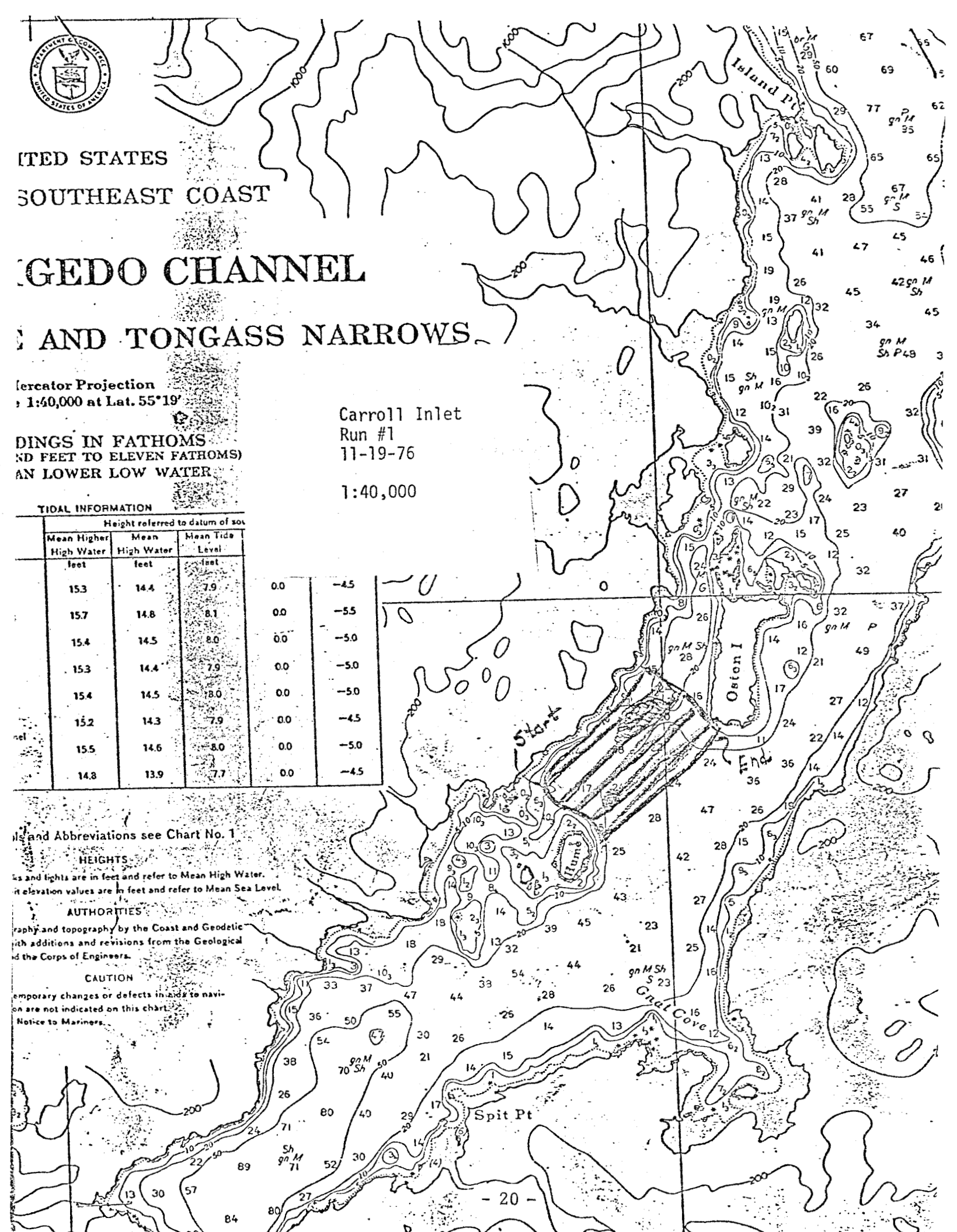
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Few birds in area of two school. Two schools of fish.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



ITED STATES

SOUTHEAST COAST

GEDO CHANNEL

AND TONGASS NARROWS

lercator Projection
1:40,000 at Lat. 55°19'

DINGS IN FATHOMS
ND FEET TO ELEVEN FATHOMS)
AN LOWER LOW WATER

Carroll Inlet
Run #1
11-19-76

1:40,000

TIDAL INFORMATION

Height referred to datum of sou				
Mean Higher High Water	Mean High Water	Mean Tide Level		
feet	feet	feet		
15.3	14.4	7.9	0.0	−4.5
15.7	14.8	8.1	0.0	−5.5
15.4	14.5	8.0	0.0	−5.0
15.3	14.4	7.9	0.0	−5.0
15.4	14.5	8.0	0.0	−5.0
15.2	14.3	7.9	0.0	−4.5
15.5	14.6	8.0	0.0	−5.0
14.8	13.9	7.7	0.0	−4.5

ls and Abbreviations see Chart No. 1

HEIGHTS

s and lights are in feet and refer to Mean High Water.
t elevation values are in feet and refer to Mean Sea Level.

AUTHORITIES

raphy and topography by the Coast and Geodetic
ith additions and revisions from the Geological
d the Corps of Engineers.

CAUTION

emporary changes or defects in aids to navi-
on are not indicated on this chart.
Notice to Mariners.

Island Pt

Obion I

Start

End

Hume I

Gnat Cove

Spit Pt

ACOUSTICAL SURVEY FORM

AREA George Inlet Run# 1

Date 11-17-76 Vessel AUKLET

Operators Blankenbeckler, Copeland Tide Stage flooding

GENERAL INFORMATION: Tape index 0000 → 0023

1/ Calibration tone side #1 - Tape index 0023 → 0064 Gain 4.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0064 @ Gain 4.0

Log time of survey: Start 1712 End 1740 Total 28 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP Blk. & Shield

Tape reversed @ -- on tape index

Taping of run ended @ 0749 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

Ron Porter, local herring seine fisherman, aboard. Visual estimate 2-3 10^6 lbs. Last calibration of gear Dec. 1975. Gain setting too low. Run #2 best run.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

ACOUSTICAL SURVEY FORM

AREA George Inlet Run# 2

Date 11-17-76 Vessel AUKLET

Operators Blankenbeckler, Copeland Tide Stage Flooding

GENERAL INFORMATION: Tape index 0000 → 2300

1/ Calibration tone side #1 - Tape index 0749 → 0768 Gain 5.5

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0768 @ Gain 5.5

Log time of survey: Start 1757 End 1824 Total 27 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116VAC

Calibration oc. setting 500 mv Transmit pulse 220 pp. Black & Shield

Tape reversed @ 1032 on tape index

Taping of run ended @ 0874 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

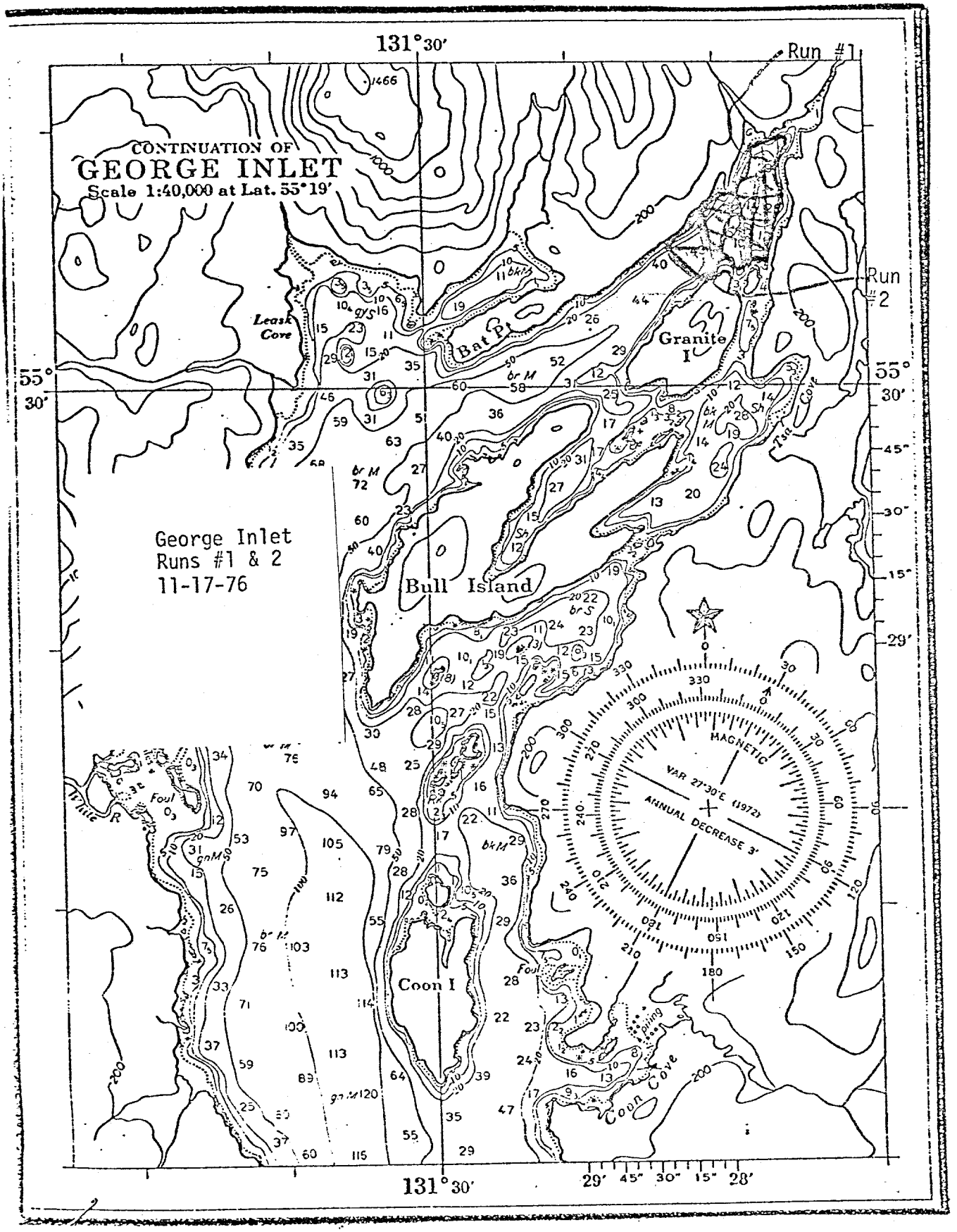
_____ → _____ _____

_____ → _____ _____

COMMENTS:

No calibration tone on reverse side of reel because no fish observed. Visual estimate 2-3 million lbs. Ron Porter, local seiner, aboard. Sample area 643,107 square meters. Herring were on the bottom at 1500 hours. Started off at 1630 hours.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


CONTINUATION OF
GEORGE INLET
Scale 1:40,000 at Lat. 55°19'
131°30'
Run #1
Run #2
55° 30'
George Inlet
Runs #1 & 2
11-17-76
Bull Island
Granite I
Coon I
Leask Cove
Bat P
Coon Cove
MAGNETIC
VAR 27°30'E (1972)
ANNUAL DECREASE 3'
29' 45' 30' 15' 28'

ACOUSTICAL SURVEY FORM

AREA George Inlet Run# 1 & 2

Date 11-20-76 Vessel AUKLET

Operators Blankenbeckler, Griffin Tide Stage ebbing

GENERAL INFORMATION: Tape index 0000 → 0022

1/ Calibration tone side #1 - Tape index 0022 → 0064 Gain 4.5

0632 → 0656 5.5

____ → ____ ____

____ → ____ ____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0064 / 0658 @ Gain 4.5 / 5.5

Log time of survey: Start 1700 / 1733 End 1726 / 1800 Total 26 min. / 27 min.

Attenuated @ -12 db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse 200 VPP Blk & Shield

Tape reversed @ 1000 on tape index

Taping of run ended @ 0634, 0823 on tape index

Calibration tone side #2 - Tape index 0823 → -- @ Gain 5.5

____ → ____ ____

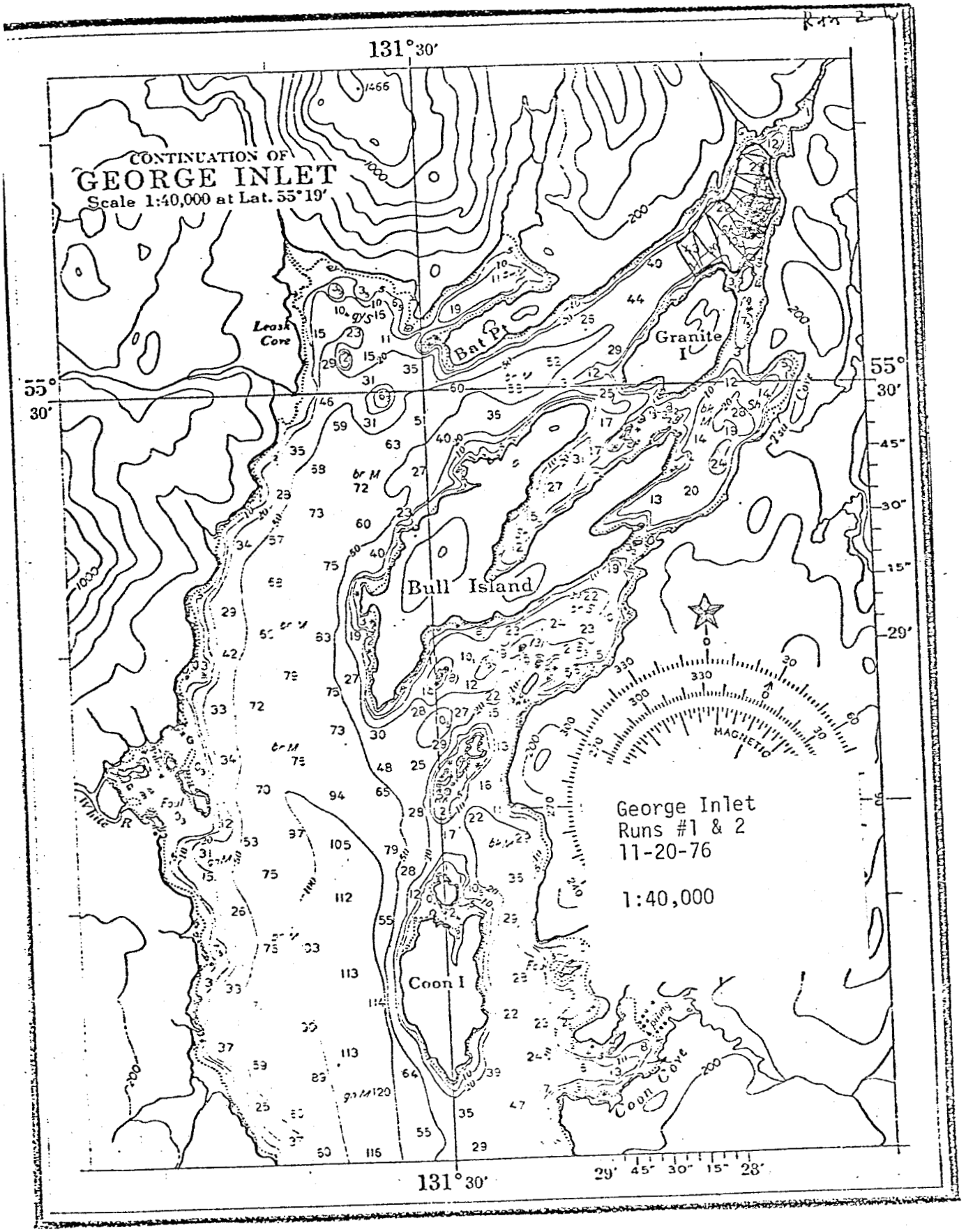
____ → ____ ____

____ → ____ ____

COMMENTS:

Sea lions & bird concentrations in area of school. Aerial survey spotted gulls and sea lions also inside salt chuck in lagoon. Herring on bottom at 1600 hours. Starting to come off at 1630 hours. One nice school same location as 11-18-76.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


131°30'
CONTINUATION OF
GEORGE INLET
Scale 1:40,000 at Lat. 55°19'
55°30'
Leask Cove
Bat Pt.
Granite I
Bull Island
Coon I
Coon Cove
MAGNETIC
George Inlet
Runs #1 & 2
11-20-76
1:40,000
131°30'
29' 45' 30' 15' 28'

ACOUSTICAL SURVEY FORM

AREA George Inlet Run# 1 & 2

Date 1-6-77 Vessel AUKLET

Operators Blankenbeckler, Copeland Tide Stage _____

GENERAL INFORMATION: Tape index 0000 & 0432 → 0015 & 0440

1/ Calibration tone side #1 - Tape index 0015 → 0056 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0056 & 0440 @ Gain 5.0

Log time of survey: Start 1715 & 1737 End 1727 & 1748 Total 12 & 11 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 210 VPP Blk & Shie

Tape reversed @ --- on tape index

Taping of run ended @ 0432 & 0697 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

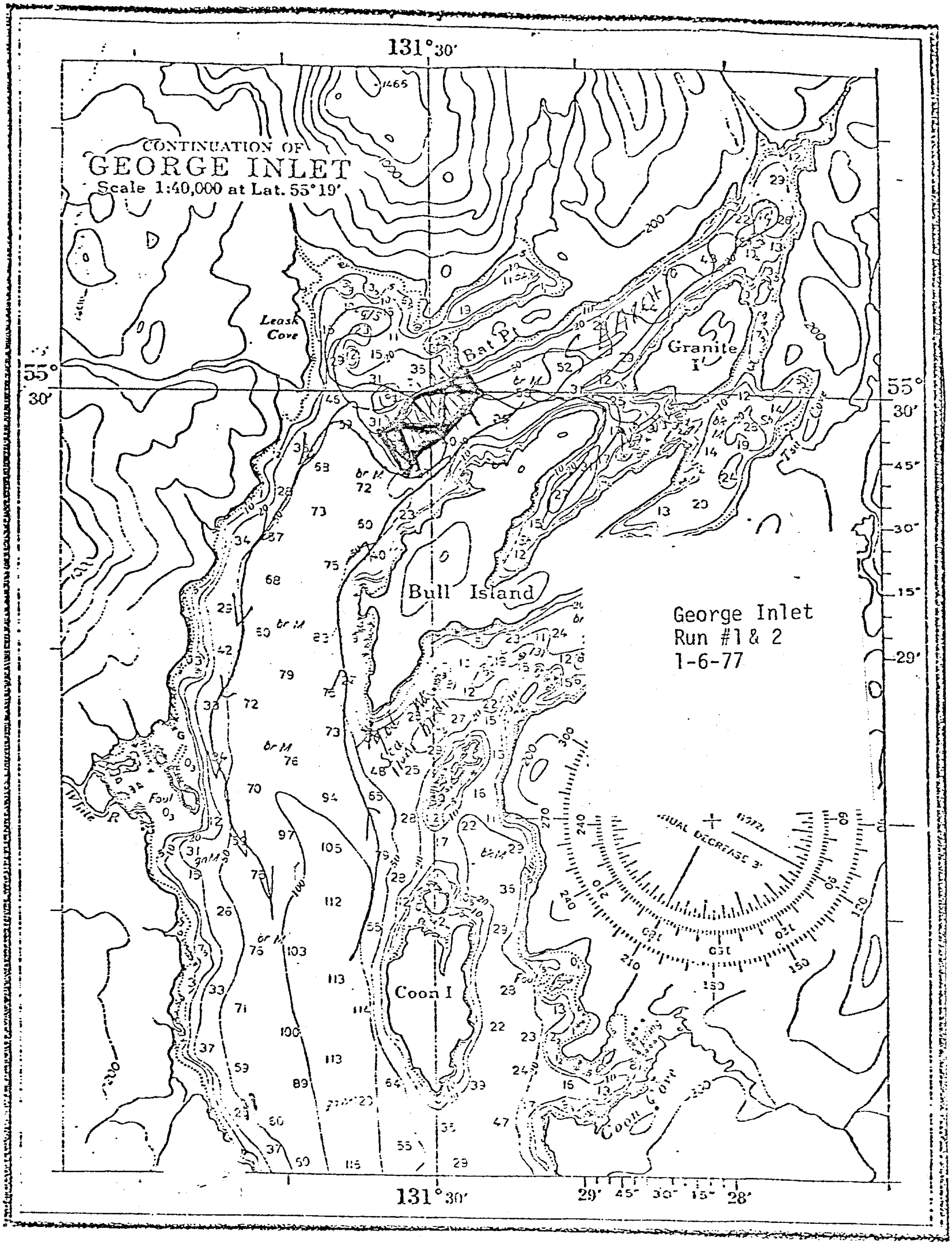
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Transmit pulse 205-210 VPPcompared to previous 220 VPP reading. Both runs of short duration over small dense school. Herring moving toward surface fast. Surve design on Run #1 was poor (running parallel to trench rather than perpendicular as in Run #2). Run #2 indicative of school with no lateral movement of herring occurring. Slight saturation on one leg observed. Sea lions and birds in vicinity of herring school.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


CONTINUATION OF
GEORGE INLET
Scale 1:40,000 at Lat. 55°19'
131°30'
55° 30'
Leask Cove
Bat P.
Granite I
Bull Island
Coon I
Coon Cove
George Inlet
Run #1 & 2
1-6-77

ACOUSTICAL SURVEY FORM

AREA Kasaan Bay (40 lb. Pt.) Run# 1

Date 3-2-77 Vessel SUNDANCE

Operators Westlund Tide Stage Flooding

GENERAL INFORMATION: Tape index 30 → 30

1/ Calibration tone side #1 - Tape index 30 → 71 on stand Gain 5.7

910 → end -on run 5.7

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 71 @ Gain 5.7

Log time of survey: Start 1420 End 1503 Total 43 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 3 Input voltage 116 V AC

Calibration oc. setting 500 mv Transmit pulse _____

Tape reversed @ -- on tape index

Taping of run ended @ 910 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

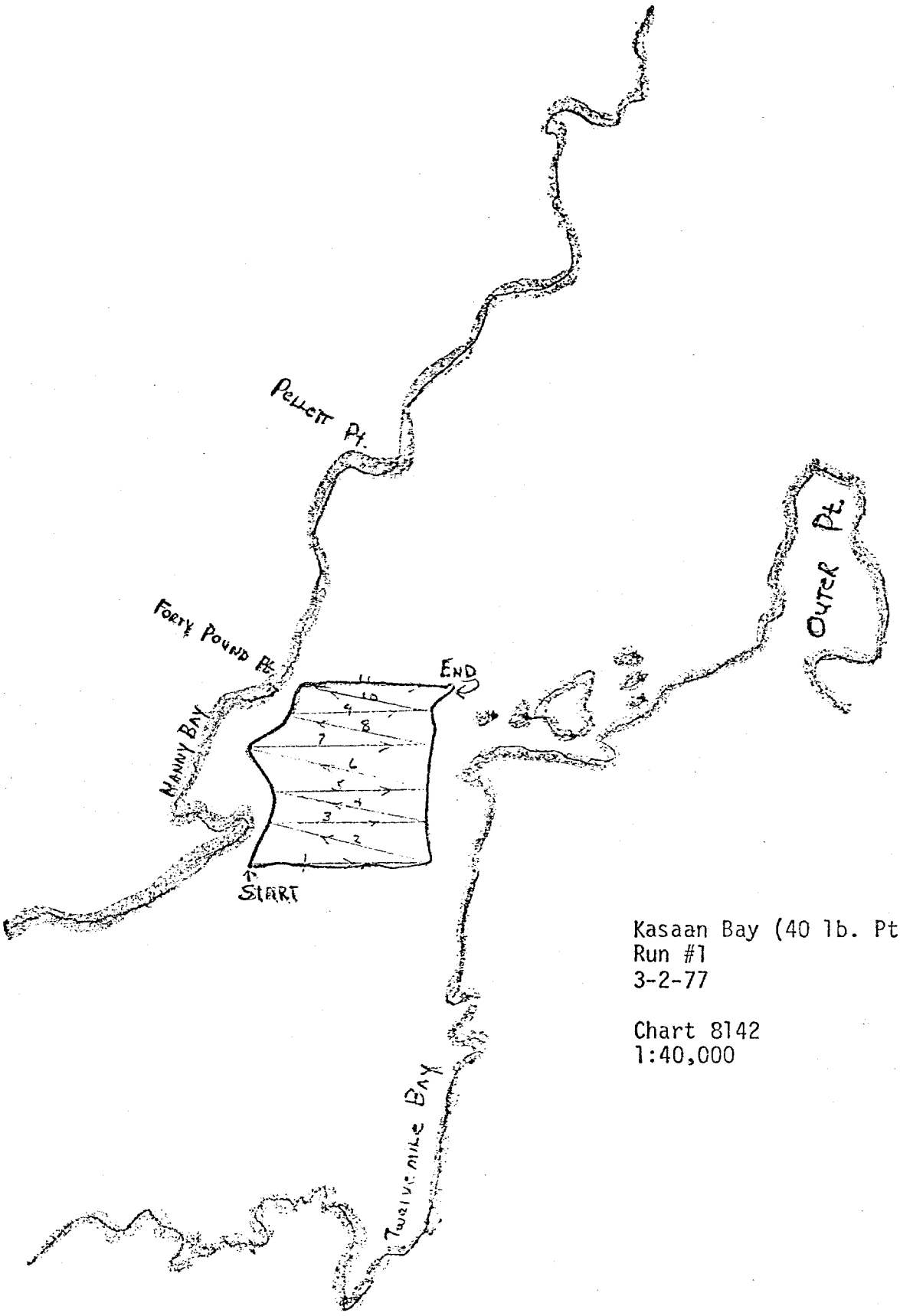
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Calibration tone at START of survey on standby, tone at end of the tape (side #1) is on RUN mode and is good. Approximately 910 on tape index. Visual estimate 3.0 million pounds.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Kasaan Bay (40 lb. Pt.)
Run #1
3-2-77

Chart 8142
1:40,000

ACOUSTICAL SURVEY FORM

AREA Kasaan Bay (40 lb. Pt.) Run# 1

Date 3-10-77 Vessel SUNDANCE

Operators Westlund Tide Stage ebb

GENERAL INFORMATION: Tape index 0001 → 0042

1/ Calibration tone side #1 - Tape index 0001 → 0042 Gain 5.58

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0065 @ Gain 5.58

Log time of survey: Start 1400 End 1437 Total 37 min.

Attenuated @ -12db. Pulse length long Tape speed 7.5

Paper speed 3 Input voltage 117 V AC

Calibration oc. setting 500 mv Transmit pulse _____

Tape reversed @ -- on tape index

Taping of run ended @ 0995 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

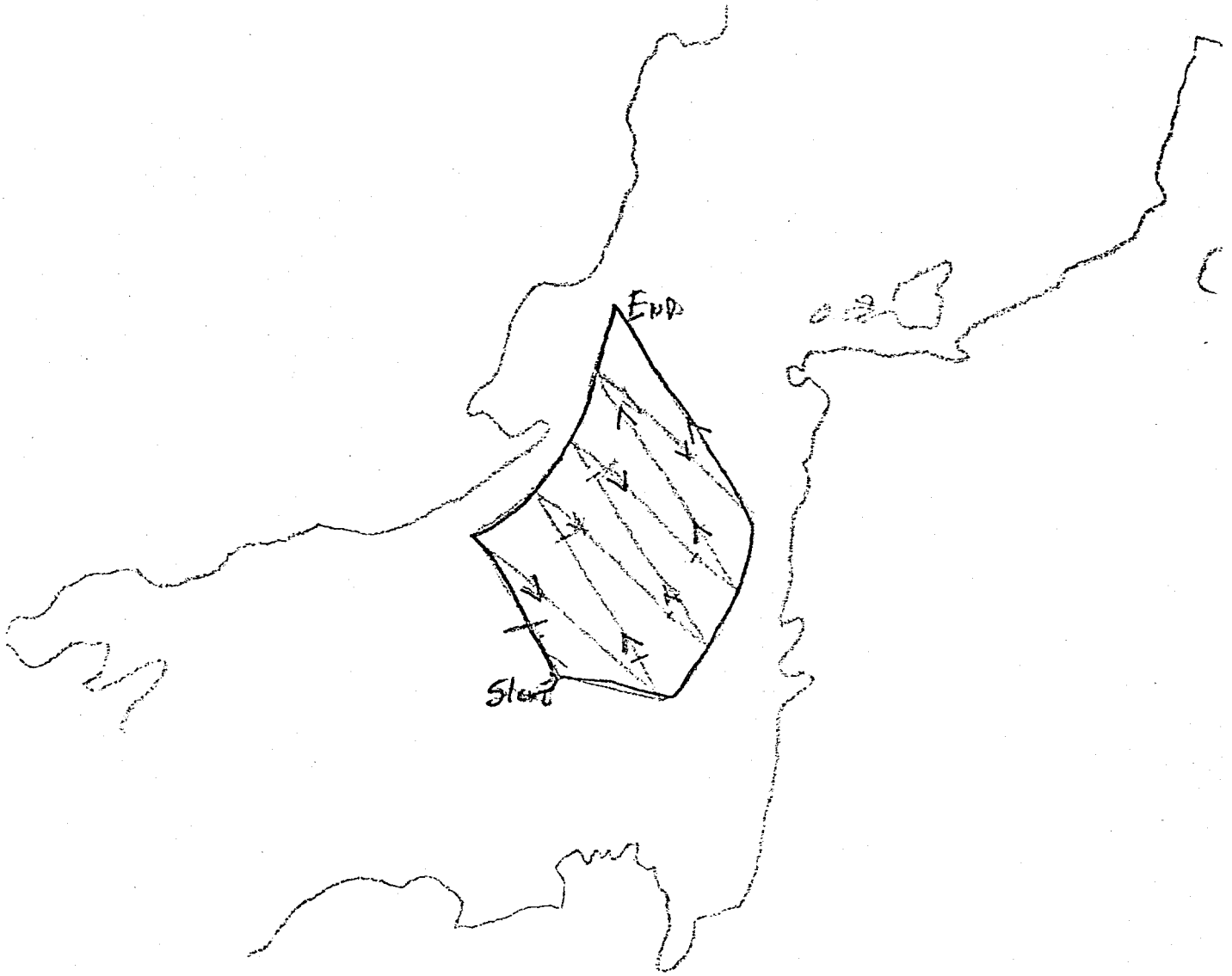
COMMENTS:

Fairly large school but low density, question if actually herring. Should be checked.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Kasaan Bay (40 lb. Pt.)
Run #1
3-10-77

Chart 8142
1:40,000



ACOUSTICAL SURVEY FORM

AREA Kasaan Bay (40 lb. Pt.) Run# 2

Date 3-10-77 Vessel SUNDANCE

Operators Westlund Tide Stage _____

GENERAL INFORMATION: Tape index 0001 → 0047

1/ Calibration tone side #1 - Tape index 0047 → 0061 Gain 5.9

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0061 @ Gain 5.9

Log time of survey: Start 1500 End 1617 Total 77 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 3 Input voltage 116 V AC

Calibration oc. setting 500 mv Transmit pulse _____

Tape reversed @ 0938 on tape index

Taping of run ended @ 0061 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

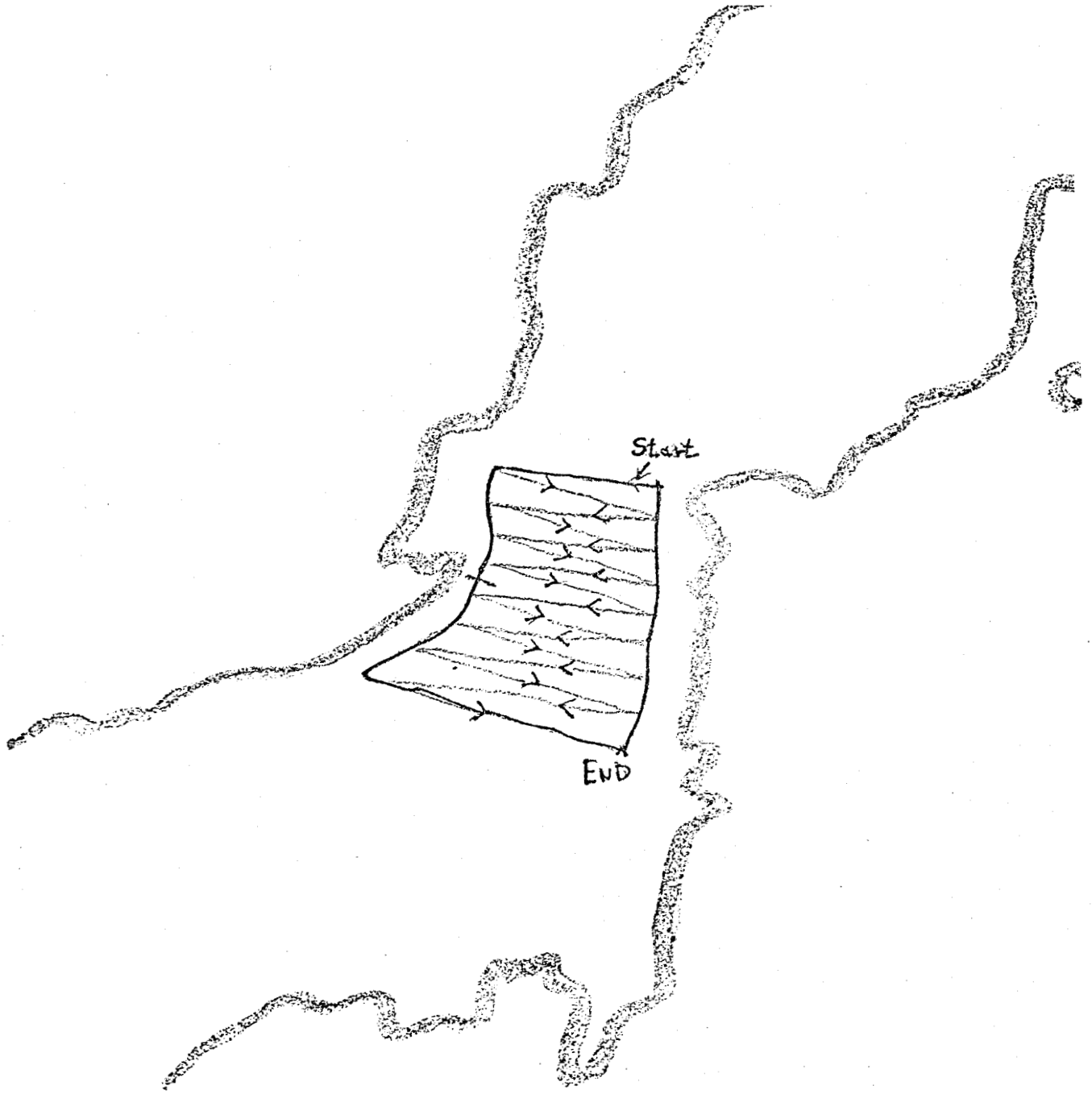
COMMENTS:

Large area of school but low constant density - ??? if herring.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Kasaan Bay (40 lb. Pt.)
Run #2
3-10-77

Chart 8142
1:40,000



ACOUSTICAL SURVEY FORM

AREA Kasaan Bay Run# 1

Date 4-11-77 Vessel SUNDANCE

Operators DeJong, Valentine Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0028

1/ Calibration tone side #1 - Tape index 0028 → 0079 Gain 5.5

→ Gain

→ Gain

→ Gain

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0079 @ Gain 5.5

Log time of survey: Start 1545 End 1640 Total 95 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration oc. setting 500 mv Transmit pulse

Tape reversed @ -- on tape index

Taping of run ended @ 1067 on tape index

Calibration tone side #2 - Tape index → @ Gain

→ Gain

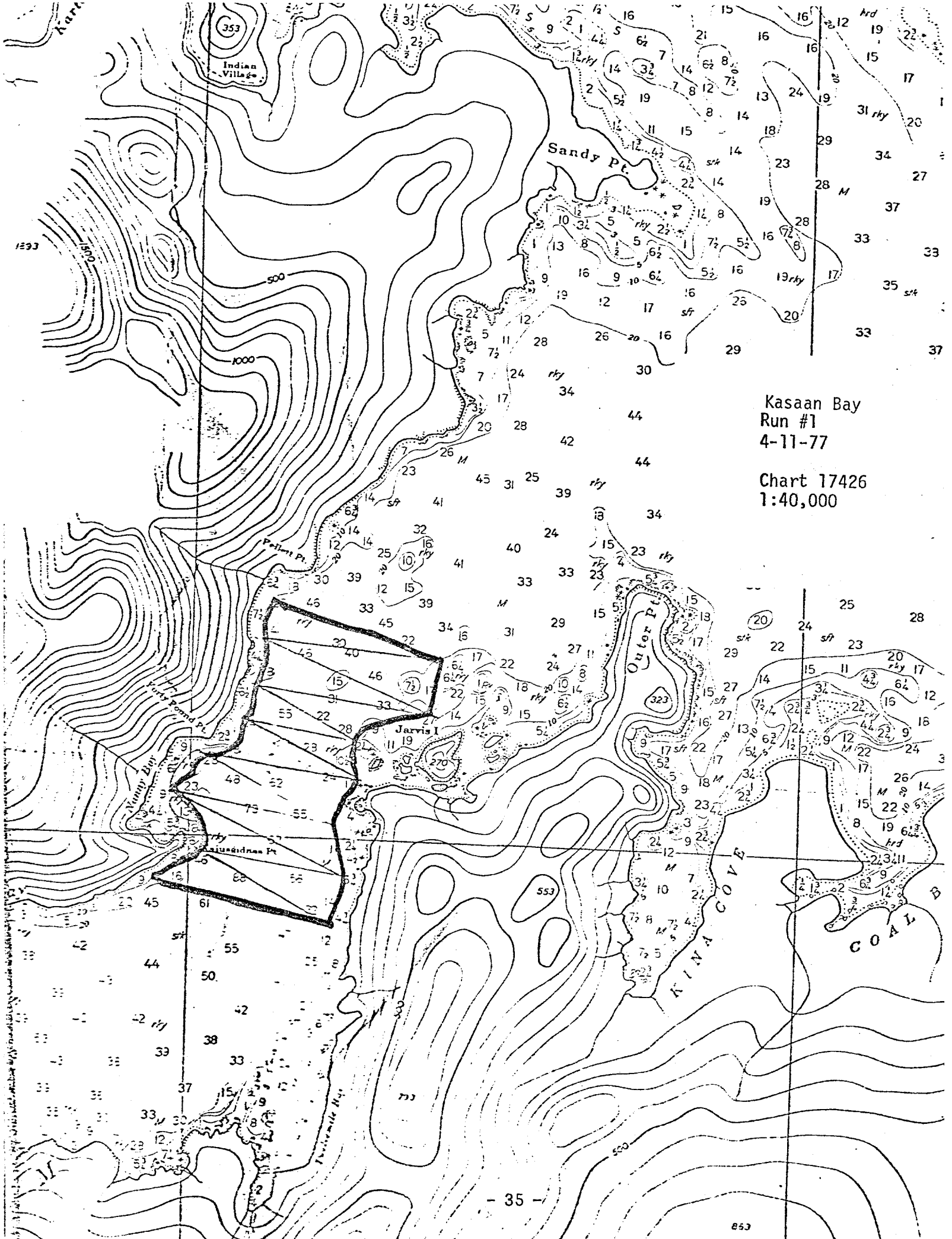
→ Gain

→ Gain

COMMENTS:

Fish distributed in large schools at low density. Questionable if in fact herring - should be verified.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Indian Village
Sandy Pt.
Kasaan Bay
Run #1
4-11-77
Chart 17426
1:40,000
Pellant Pt.
Jarvis I
Outer Pt.
KINA COVE
COAL B

ACOUSTICAL SURVEY FORM

AREA Kasaan Bav Run# 2

Date 4-11-77 Vessel SUNDANCE

Operators DeJong Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0032

1/ Calibration tone side #1 - Tape index 0032 → 0080 Gain 6.1

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0200 @ Gain 6.1

Log time of survey: Start 1715 End 1805 Total 90 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration oc. setting 500 mv Transmit pulse _____

Tape reversed @ -- on tape index

Taping of run ended @ 1065 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

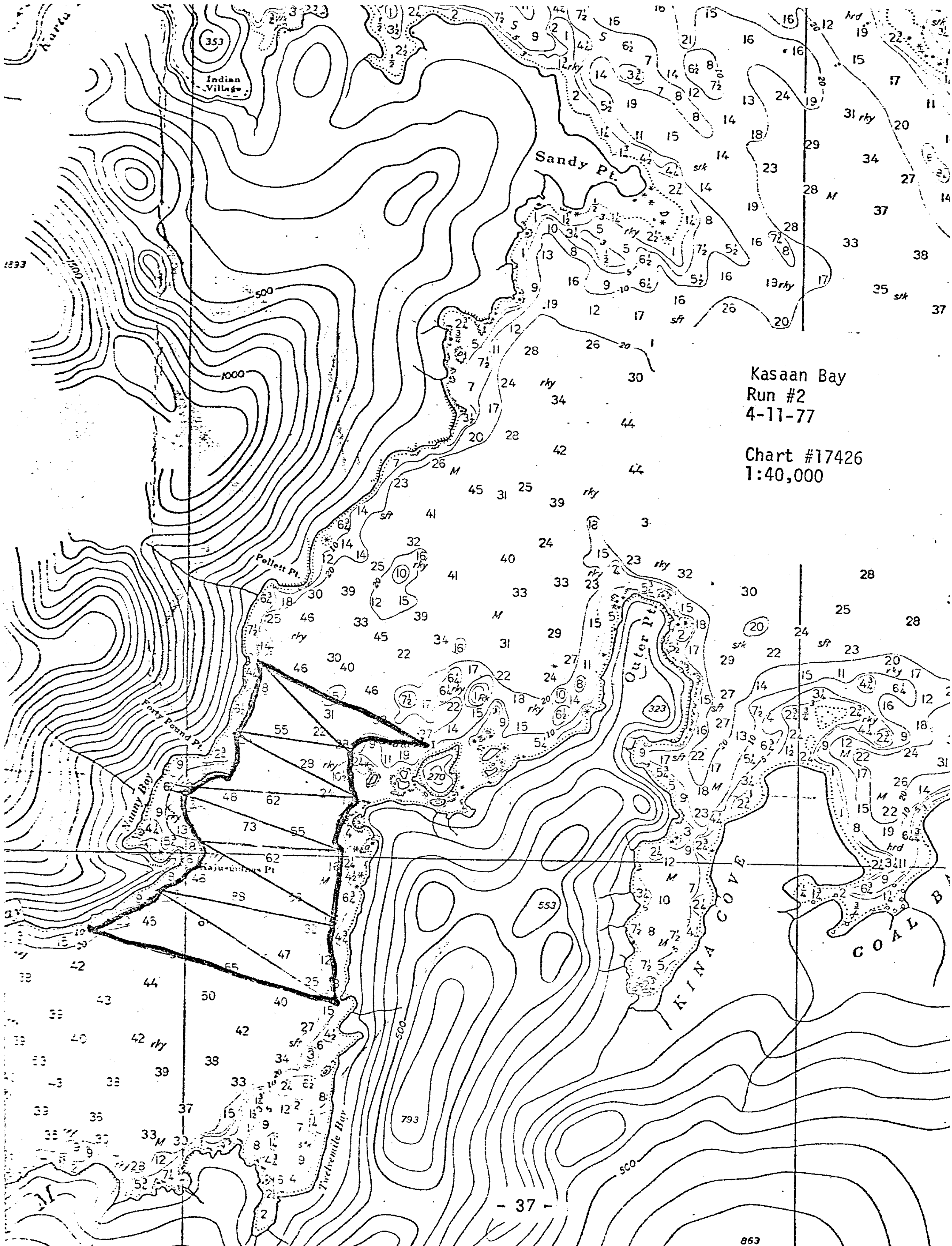
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Between 0080 and 0200 is on the tape but not part of survey. Question if actually herring.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Kasaan Bay
Run #2
4-11-77

Chart #17426
1:40,000

ACOUSTICAL SURVEY FORM

AREA Bocas de Finas Run# 1

Date 1-21-77 Vessel KITTIWAKE

Operators Blankenbeckler Tide Stage flooding

GENERAL INFORMATION: Tape index 0000 → 0020

1/ Calibration tone side #1 - Tape index 0020 → 0063 Gain 6.5

Side #2 1024 → 1008 6.5

0390 → 0350 6.5

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0063 @ Gain 6.5

Log time of survey: Start 1245 End 1405 Total 80 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 260 VPP Blk & Shie

Tape reversed @ 1050 on tape index

Taping of run ended @ 0403 on tape index

Calibration tone side #2 - Tape index → @ Gain

→

→

→

COMMENTS:

No bird activity, 1 sea lion, 2 killer whales nearby. Herring distributed 60-70 fathom depth, spread out evenly. Survey area followed 50 fathom contour. One school off bottom outside survey area, another nice school, approx. 50 f. near warm chuck not included in survey.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

ACOUSTICAL SURVEY FORM

AREA Bocas de Finas Run# 2

Date 1-21-77 Vessel KITTIWAKE

Operators Blankenbeckler Tide Stage ebbing

GENERAL INFORMATION: Tape index 0000 → 0020

1/ Calibration tone side #1 - Tape index 0020 → 0060 Gain 6.5

Side #1 0960 → 0975 6.0

Side #2 — 0537 → 0514 6.0

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0060 / 0975 @ Gain 6.5 / 6.0

Log time of survey: Start 1440 End 1555 Total 75 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 260 VPP Blk & Shi

Tape reversed @ 1050 on tape index

Taping of run ended @ 0960 & 0537 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

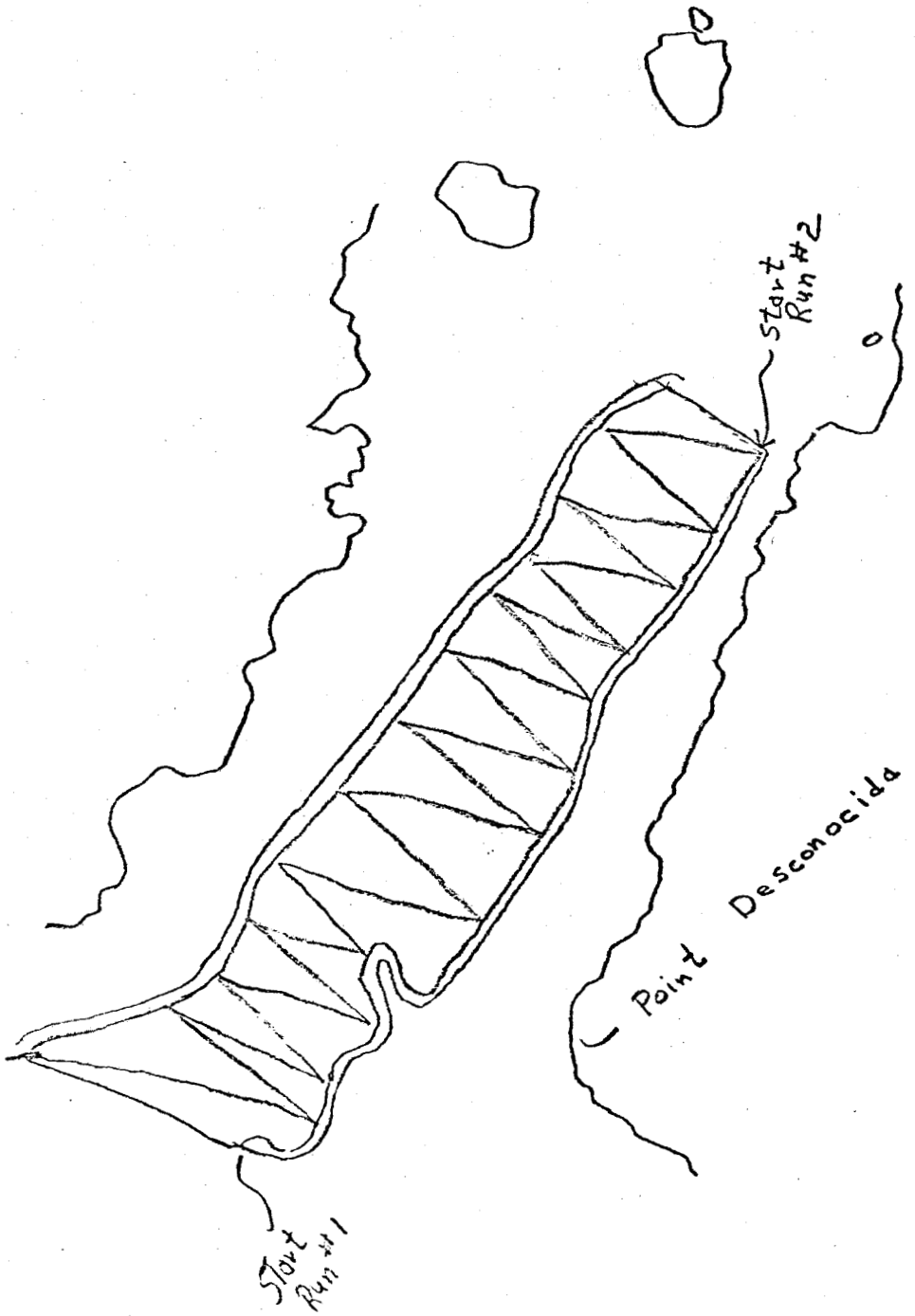
COMMENTS:

Survey reverse of Run #1 except for an adjustment on one leg. Herring distributed 50-60 fathoms and starting to concentrate to edge of the trench. No bird activity observed. Herring vulnerable to assessment during daylight hours

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Bocas de Finas
Run 1 & 2
1-21-77

Chart 8157
1:40,000



ACOUSTICAL SURVEY FORM

AREA Bocas de Finas Run# 1

Date 1-30-77 Vessel NMFS JOHN COBB

Operators Dahlberg, Carlson, Blankenbeckler Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0041

1/ Calibration tone side #1 - Tape index 0041 → 0079 Gain 7.5

Reel 1, side 1 0136 → 0057 7.5

Reel 2, side 1 — 0000 → 0050 7.5

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index Reel 1, side 1 0080 @ Gain 7.5

Log time of survey: Start 1210 End 1453 Total 163 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 113 VAC

240 VPP Wht & Shie
230 VPP Blk & Shie
235 VPP Wht & Shie
220 VPP Blk & Shie

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ Reel 1 1028 / Reel 2 1043 on tape index

Taping of run ended @ Reel 2, side 2 0710 on tape index

Calibration tone side #2 - Tape index 0708 → 0688 @ Gain 7.5 @ -12db

0688 → 0667 7.5 @ -12db

→

→

COMMENTS:

Noise spikes observed when Ross set at 50-100 fathoms at the 50 f. level betwee
100 % 120 ms. Two midwater trawls.
Drag #1 - 57.1 pounds total, of which 32.5 lbs. herring, 1947 true cod, 5.2 pollo
Drag #2 - 237.3 lbs. total, of which 220.3 adult herring, 12.0 true cod, 5.0 poll
Transducer SN 330 for calibration data.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

ACOUSTICAL SURVEY FORM

AREA Bocas de Finas Run# 2

Date 1-30-77 Vessel NMFS JOHN COBB

Operators Dahlberg, Carlson, Blankenbeckler Tide Stage

GENERAL INFORMATION: Tape index 0068 → 0064

Reel 3, side 2 0470 0457

1/ Calibration tone side #1 - Tape index

0708	→ 0688	Gain 7.5	@ -12d
Reel 2, side 2 0688	→ 0667	7.5	@ -20d
	→		
	→		

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index Reel 2, side 2 0064 @ Gain 7.5

Reel 3, side 2 1027 7.0

Log time of survey: Start 1713 End 1900 Total 107 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 113 VAC

Calibration osc setting 500 mv Transmit pulse (Start)- 220 VPP Blk & Shi 225 VPP Blk & Shi (e

Tape reversed @ 1043 reel 3 on tape index

Taping of run ended @ Reel 3, side 2 0905 on tape index

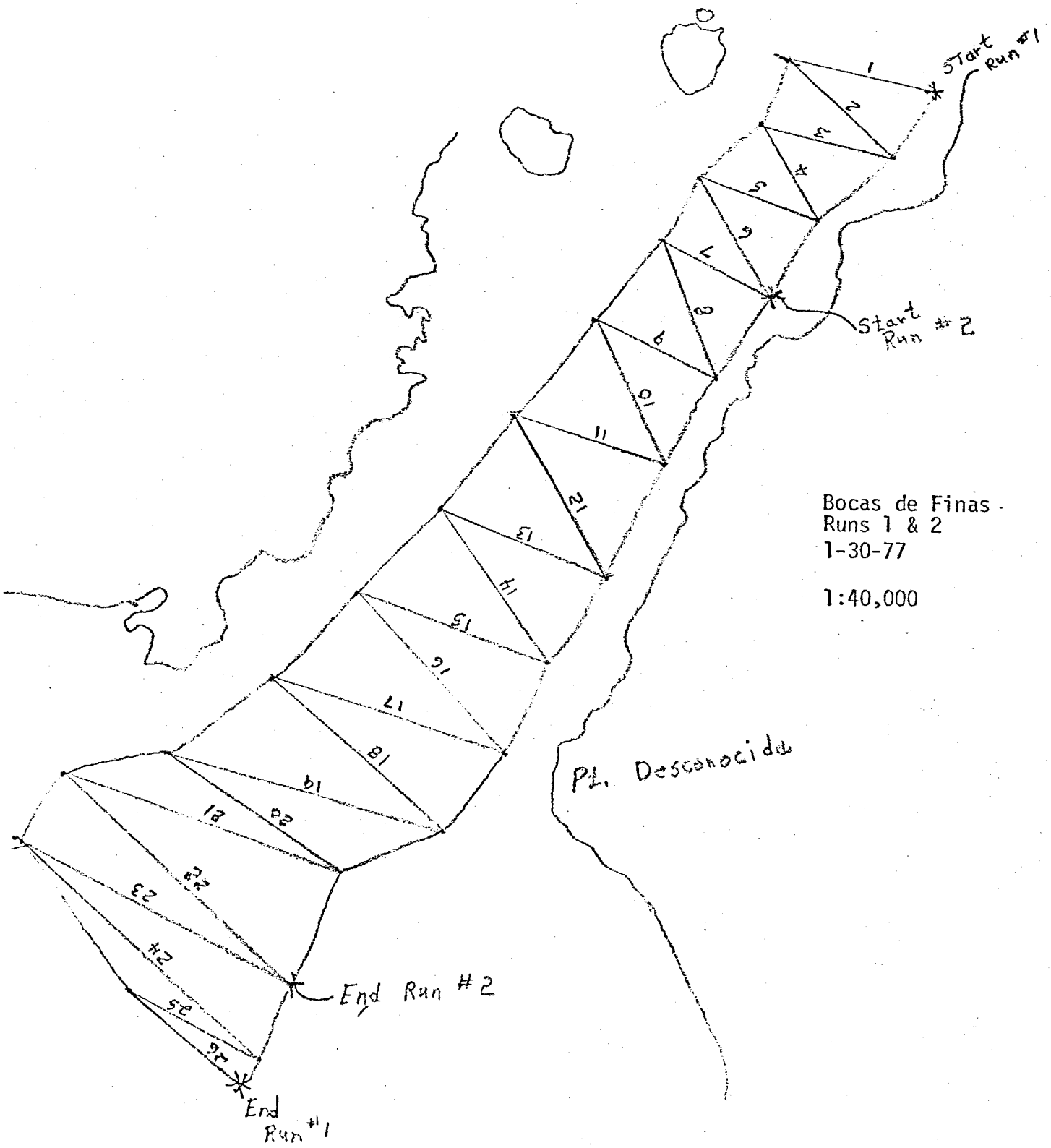
Calibration tone side #2 - Tape index

0824	→ --	@ Gain 7.5	@ -12d
Reel 3, side 1 ---	→ 0860	7.5	@ -20d
1005	→ 0988	7.0	@ -12d
Reel 3, side 2 0098	→ 0977	7.0	@ -20d
0894	0874	5.0	@ -12d
0512	0470	5.0	@ -12d

COMMENTS:

Transducer SN 330 for calibration data. Few sea gulls in area, very little activity.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Start Run #1
Start Run #2
Pt. Descanocida
End Run #2
End Run #1
Bocas de Finas
Runs 1 & 2
1-30-77
1:40,000

ACOUSTICAL SURVEY FORM

AREA Scow Bay Run# 1

Date 2-17-77 Vessel AUKLET

Operators Bergmann Tide Stage ebb

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0062 Gain 7.0

0062 → 0100 6.35

0100 → 0135 6.00

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0135 @ Gain 6.00

Log time of survey: Start 0734 End 0831 Total 57 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 V AC

Calibration oc. setting 500 mv Transmit pulse

Tape reversed @ 1040 on tape index

Taping of run ended @ 0801 on tape index

Calibration tone side #2 - Tape index

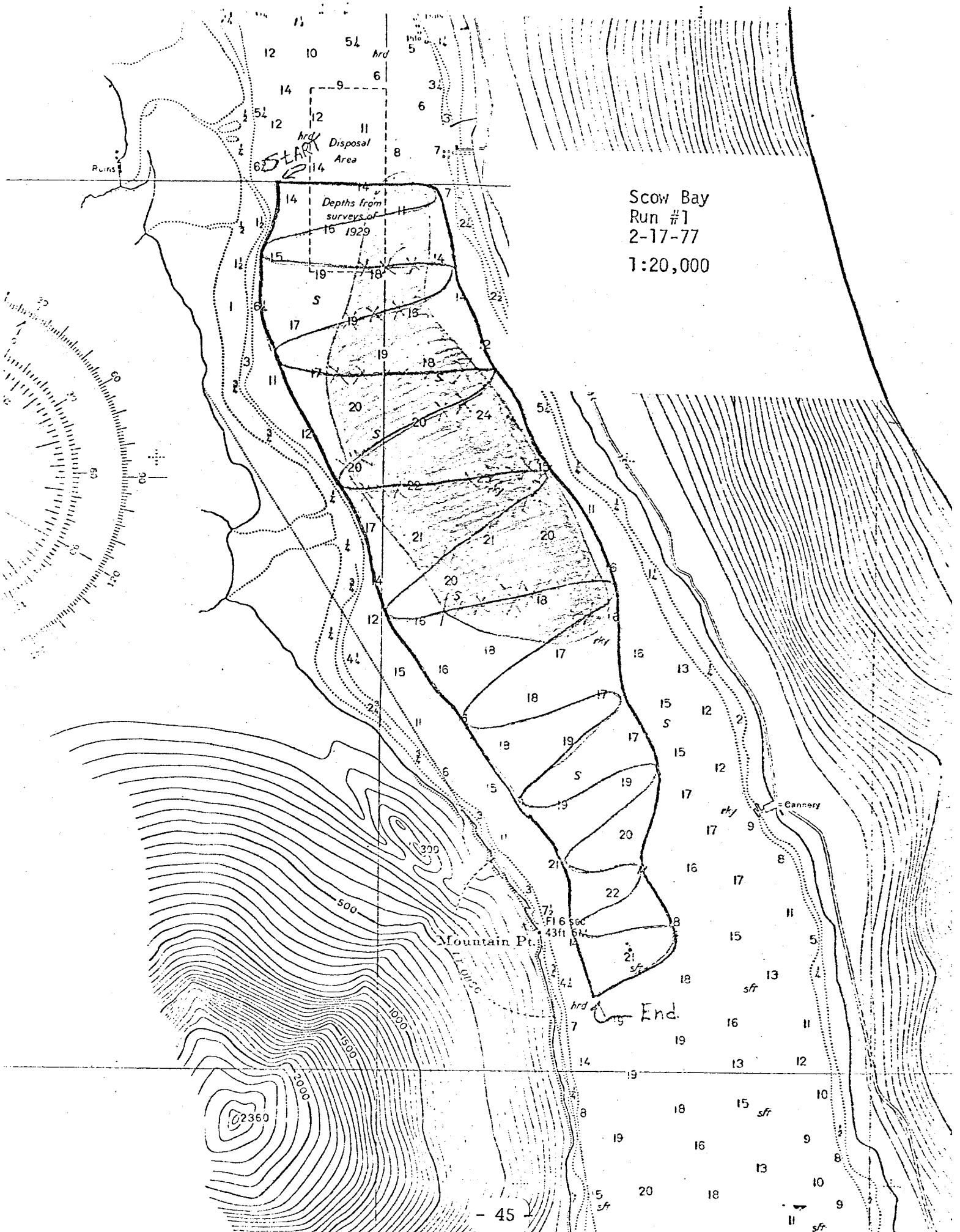
	0926	→ 0942	@ Gain	5.00
During	1026	→ 1040		6.00
After	0834	→ 0817		5.00
	0817	→ 0801		6.00

COMMENTS:

Fish were present in large numbers but computer estimate will be biased downward due to the proximity to the bottom and saturation during the end of the run when they were schooled more tightly.

Visual estimate 1.3 lb/m^2 = 3.3 million pounds.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Scow Bay
Run #1
2-17-77
1:20,000
START
End.
Depths from surveys of 1929
Disposal Area
Ruins
Cannery
Mountain Pt.
Fl 6 sec
43ft 6M
300
500
1000
1500
2000
2360

ACOUSTICAL SURVEY FORM

AREA Anita Bay Run# 1

Date 11-28-76 Vessel AUKLET

Operators Blankenbeckler, Brahy Tide Stage ebb

GENERAL INFORMATION: Tape index 0000 → 0014

1/ Calibration tone side #1 - Tape index 0014 → 0058 Gain 6.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0058 @ Gain 6.0

Log time of survey: Start 1259 End 1431 Total 92 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP Blk & Shi

Tape reversed @ 1032 on tape index

Taping of run ended @ 0058 on tape index

Calibration tone side #2 - Tape index 0058 → 0010 @ Gain 6.0

_____ → _____ _____

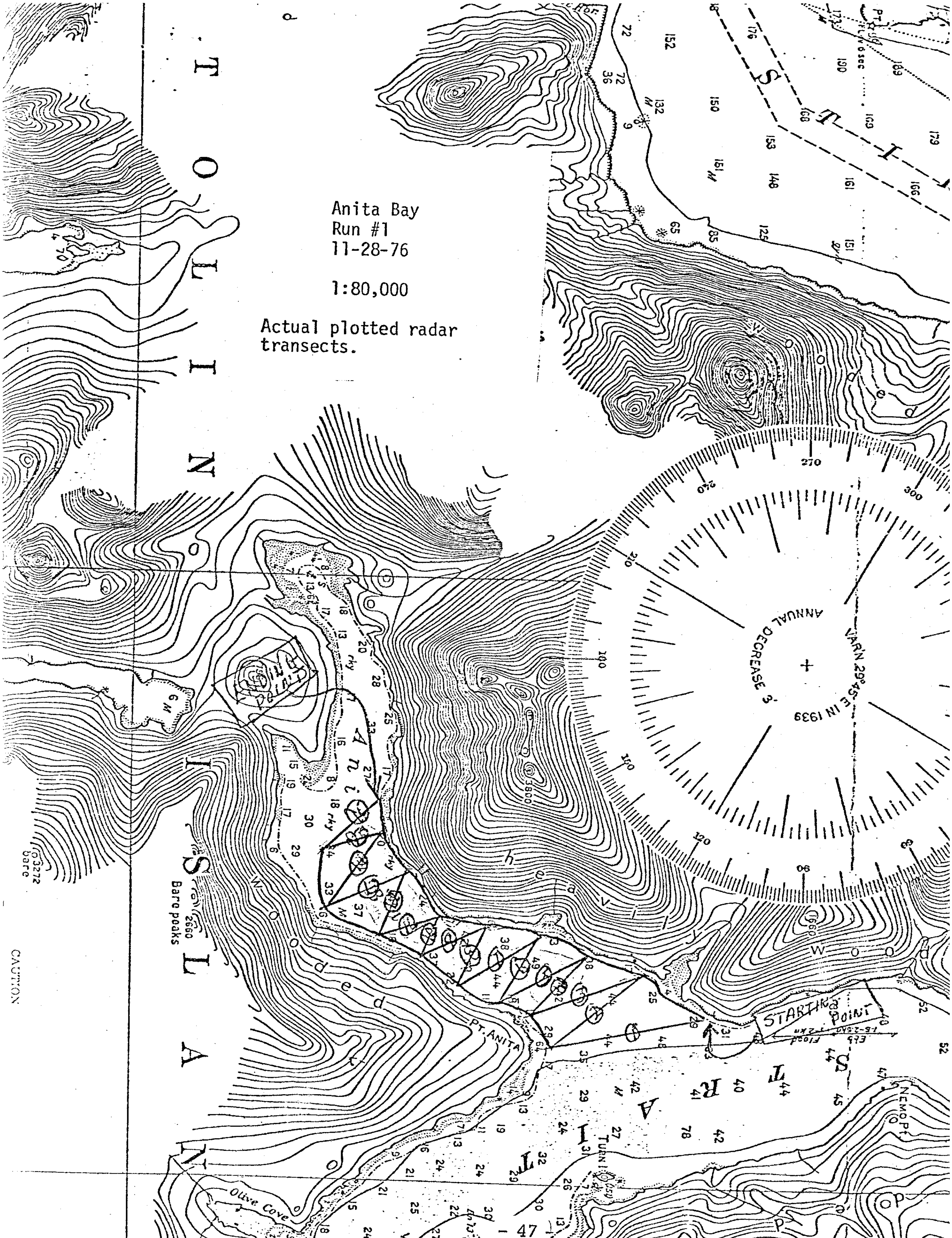
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Herring vulnerable to survey at 1300 hours. School spread out near the bottom at low densities over most of the bay. Herring were vertically distributed as follows 1300 hrs. 30-35 fa., 1600 hrs. 25-30 fa., 1800 hrs. 10-20 fa., 1830 hrs. 8-15 fa. / 0530 to 0630 hrs. on 11-29-76 herring dispersed from 5 fa. to near bottom. Few bir in area with seine fish. fleet present substantiating herring. Severals sets required due to density of herring. Herring dist. perfectly for assessment because: in large area, low uniform density and no movement. Both runs should have similia results. Also searched Nemo Pt. shore and head of bay.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Anita Bay
Run #1
11-28-76
1:80,000
Actual plotted radar transects.
STARTING POINT
PT. ANITA
Olive Cove
Bare peaks
VAR'N 29°45'E IN 1939
ANNUAL DECREASE 3'
CAUTION

ACOUSTICAL SURVEY FORM

AREA Anita Bay Run# 2

Date 11-28-76 Vessel AUKLET

Operators Blankenbeckler, Brahy Tide Stage flooding

GENERAL INFORMATION: Tape index 0000 → 0014

1/ Calibration tone side #1 - Tape index 0014 → 0056 Gain 6.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0056 @ Gain 6.0

Log time of survey: Start 1448 End 1610 Total 82 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP Blk & Shie

Tape reversed @ 1040 on tape index

Taping of run ended @ 0373 on tape index

Calibration tone side #2 - Tape index 0346 → 0304 @ Gain 6.0

_____ → _____ _____

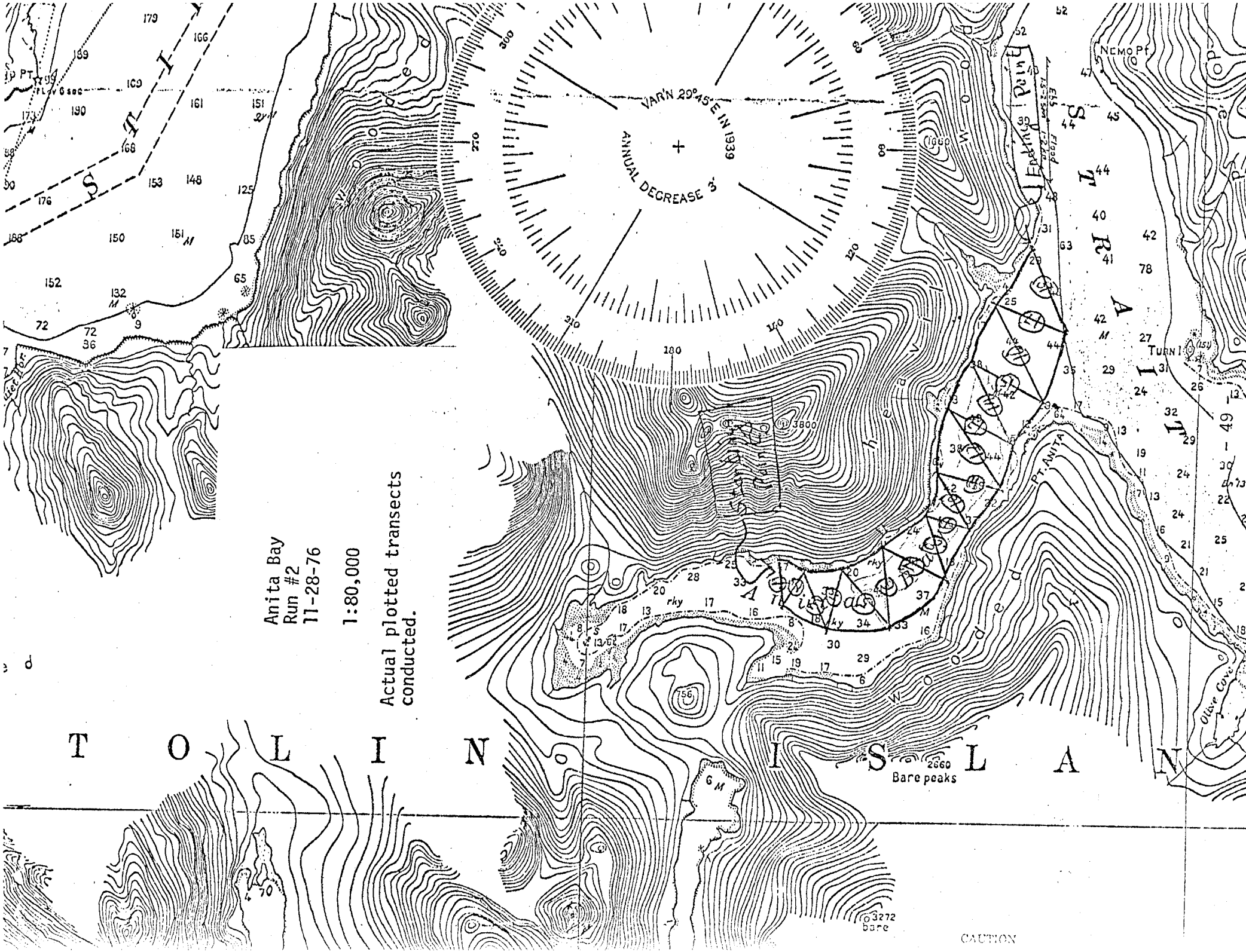
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Same as run #1 except that area was modified somewhat to fit herring concentration. Herring off bottom further than in Run #1.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Anita Bay
Run #2
11-28-76
1:80,000
Actual plotted transects conducted.
VAR'N 20°45' E IN 1939
ANNUAL DEGREASE 3'
TOLIN ISLAND
Bare peaks
CAUTION

ACOUSTICAL SURVEY FORM

AREA Anita Bay Run# 1

Date 1-4-77 Vessel AUKLET

Operators Copeland Tide Stage Flood

GENERAL INFORMATION: Tape index 0000 → 0030

1/ Calibration tone side #1 - Tape index 0030 → 0072 Gain 7.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0072 @ Gain 7.0

Log time of survey: Start 1730 End 1825 Total 55 min.

Attenuated @ -12 db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP

Tape reversed @ 1000 on tape index

Taping of run ended @ 0765 on tape index

Calibration tone side #2 - Tape index 0765 → 0725 @ Gain 7.0

_____ → _____ _____

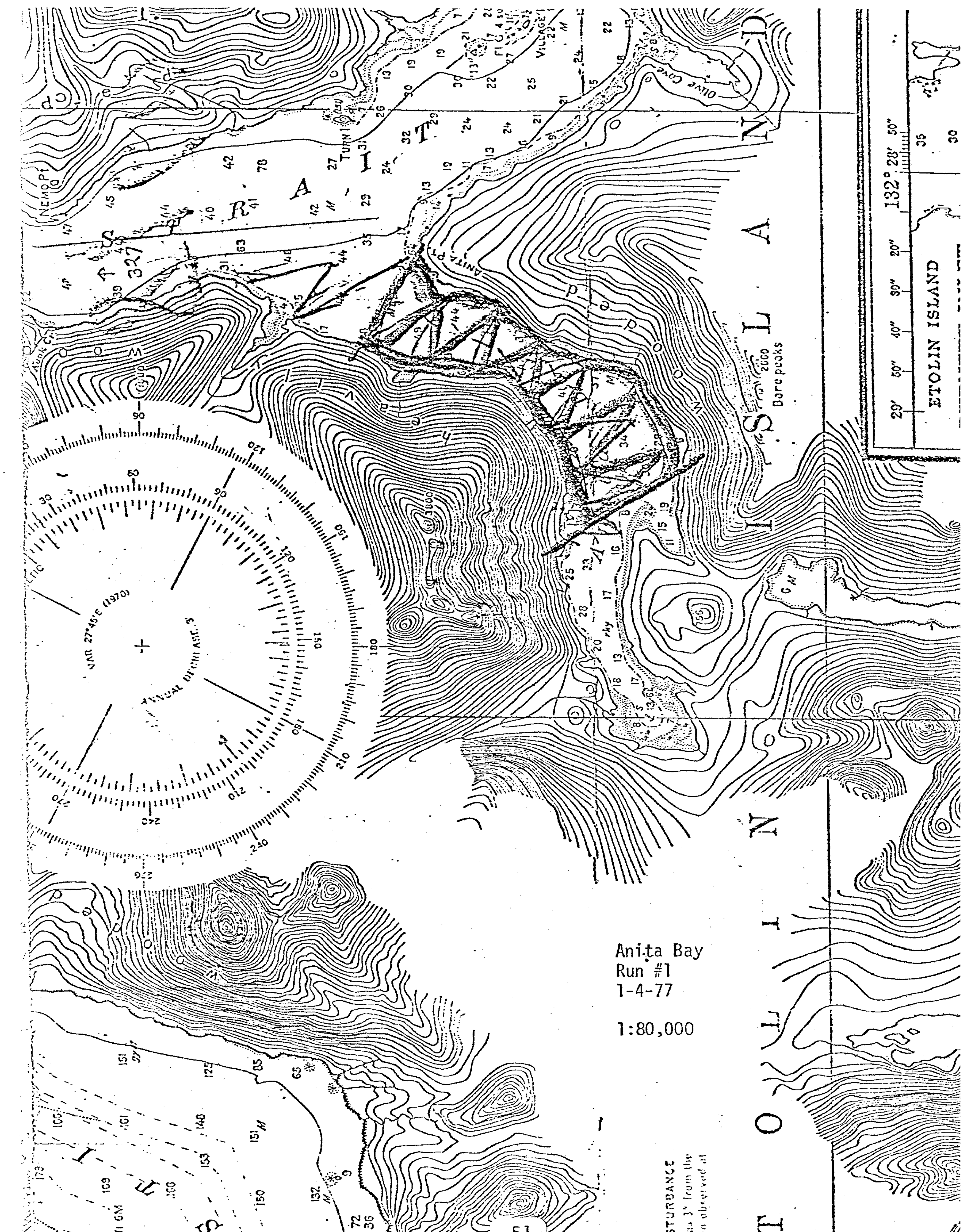
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Upper one half of bay frozen over.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Anita Bay
Run #1
1-4-77

1:80,000

ACOUSTICAL SURVEY FORM

AREA Deer Island Run# 1

Date 11-26-76 Vessel AUKLET

Operators Blankenbeckler, Brahy Tide Stage flooding

GENERAL INFORMATION: Tape index 0000 → 0011

1/ Calibration tone side #1 - Tape index 0011 → 0054 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0054 @ Gain 5.0

Log time of survey: Start 1646 End 1800 Total 74 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP Blk. & Shield

Tape reversed @ 1025 on tape index

Taping of run ended @ 0384 on tape index

Calibration tone side #2 - Tape index 0384 → 0356 @ Gain 5.0

_____ → _____ _____

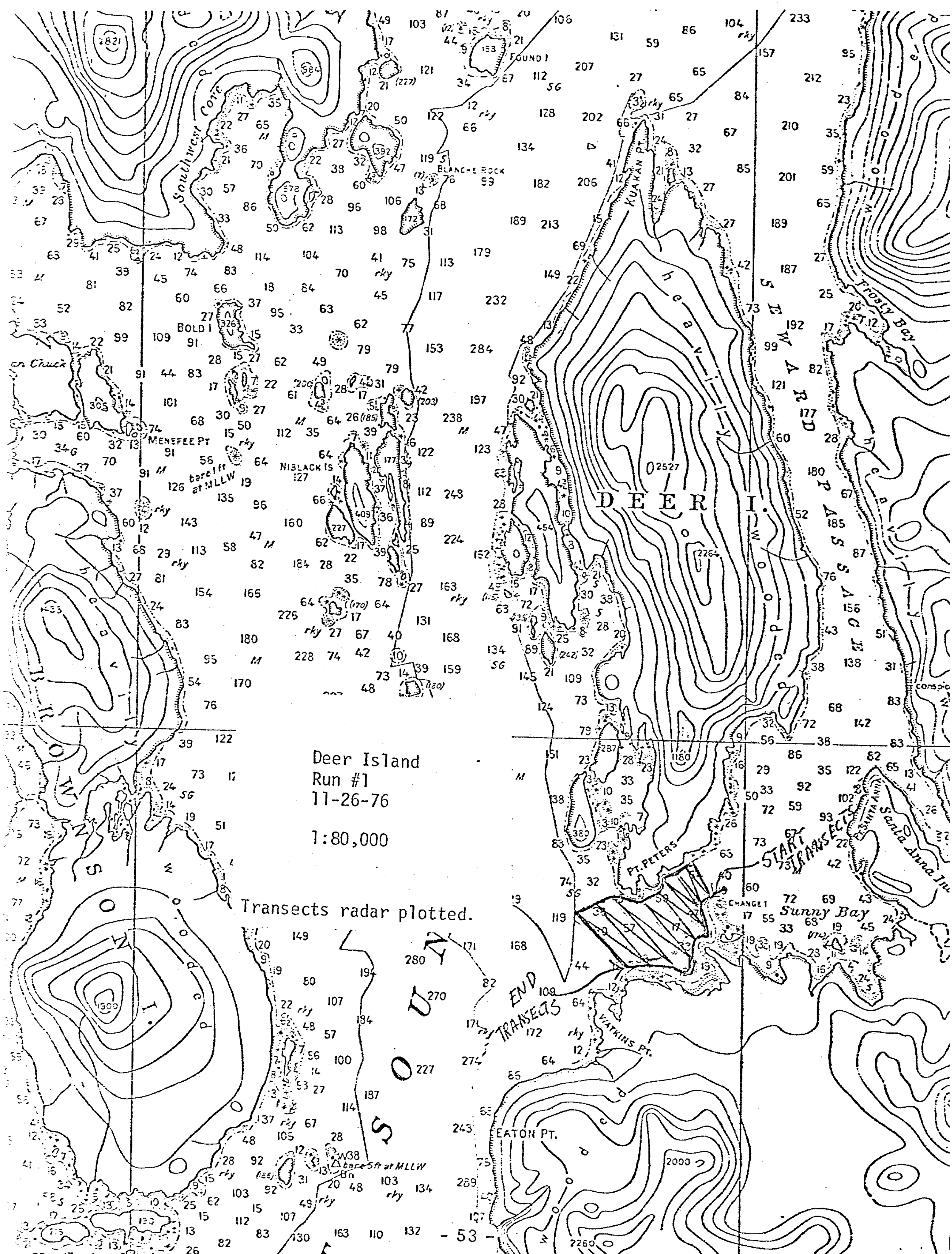
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Birds & whales in area. Nine sea lions at 1530 hours. Fish located near shore near Change Island. Whale working concentrating herring into shallows. Bay down from Watkins Point anchored at 1900 hours, herring in shallows. Calibration button pushed for marker button on first side of reel by mistake.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Deer Island
Run #1
11-26-76
1:80,000
Transects radar plotted.
DEER I.
SEWARD PASSAGE
Southwest Cove
BOLD I
MENEFEE PT
NIBLACK IS
KUAKAN PT
BLANCHE ROCK
FOUND I
Frosty Bay
PT. PETERS
START TRANSECTS
END TRANSECTS
CHANGE I
Sunny Bay
Santa Anna In
WATKINS PT.
EATON PT.
bare 1 ft at MLLW
bare 5 ft at MLLW

ACOUSTICAL SURVEY FORM

AREA Deer Island Run# 1

Date 11-27-76 Vessel AUKLET

Operators Blankenbeckler, Brahy Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0023

1/ Calibration tone side #1 - Tape index 0023 → 0066 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0066 @ Gain 5.0

Log time of survey: Start 1134 End 1220 Total 46 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP Blk. & Shi

Tape reversed @ -- on tape index

Taping of run ended @ 1061 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

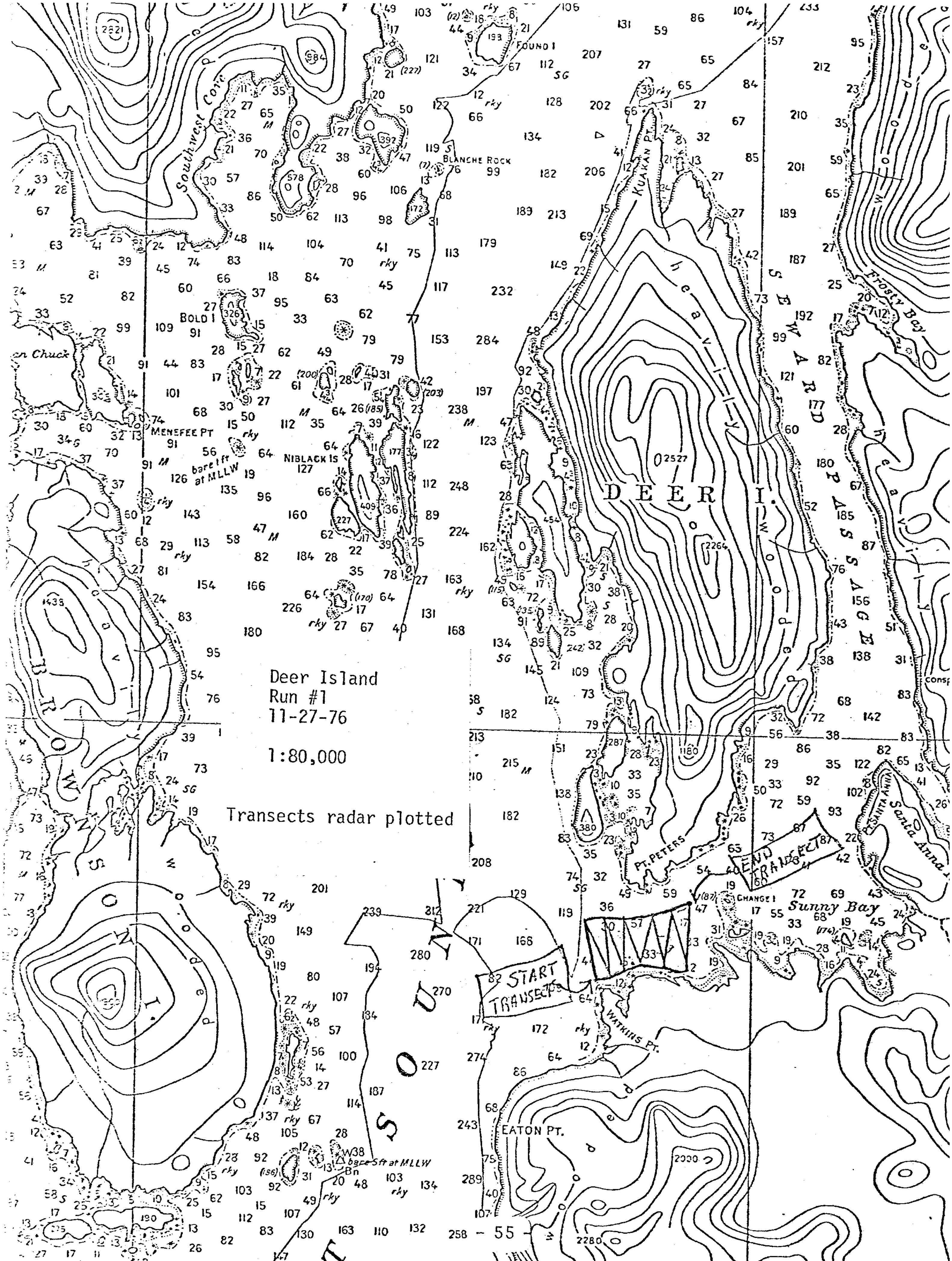
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Herring were starting to move off the shore and out (5) toward Watkins Point at 1000 hours. This was a good run, however, on the second run attempted which was a reverse of first on plotted legs of the 1st transect, herring were picked up on two legs near Change Is. and no other transects. Fish were obviously moving and concentration was becoming more dense. The 2nd run was abandoned and a time span allowed before starting 2nd run again. Whales, sea lions and bird concentrations noted at start of the run.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Deer Island
Run #1
11-27-76
1:80,000
Transects radar plotted
START TRANSECT
END TRANSECT
DEER I.
Heavily wooded
SEWARD PASSAGE
Southwest Cove
BOLD I
MENEFEE PT
NIBLACK IS
BLANCHE ROCK
FOUND I
KUAKAN PT.
PT. PETERS
WATKINS PT.
EATON PT.
CHANGE I
Sunny Bay
Santa Anna
PT SANTA ANNA
Frosty Bay
bare 1 ft at MLLW
bare 5 ft at MLLW

ACOUSTICAL SURVEY FORM

AREA Deer Island Run# 2

Date 11-27-76 Vessel AUKLET

Operators Brahy, Blankenbeckler Tide Stage ebb

GENERAL INFORMATION: Tape index 0000 → 0011

1/ Calibration tone side #1 - Tape index 0011 → 0054 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0054 @ Gain 5.0

Log time of survey: Start 1446 End 1507 Total 21 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse 220 VPP Black & Shield

Tape reversed @ 0062 on tape index

Taping of run ended @ 0636 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

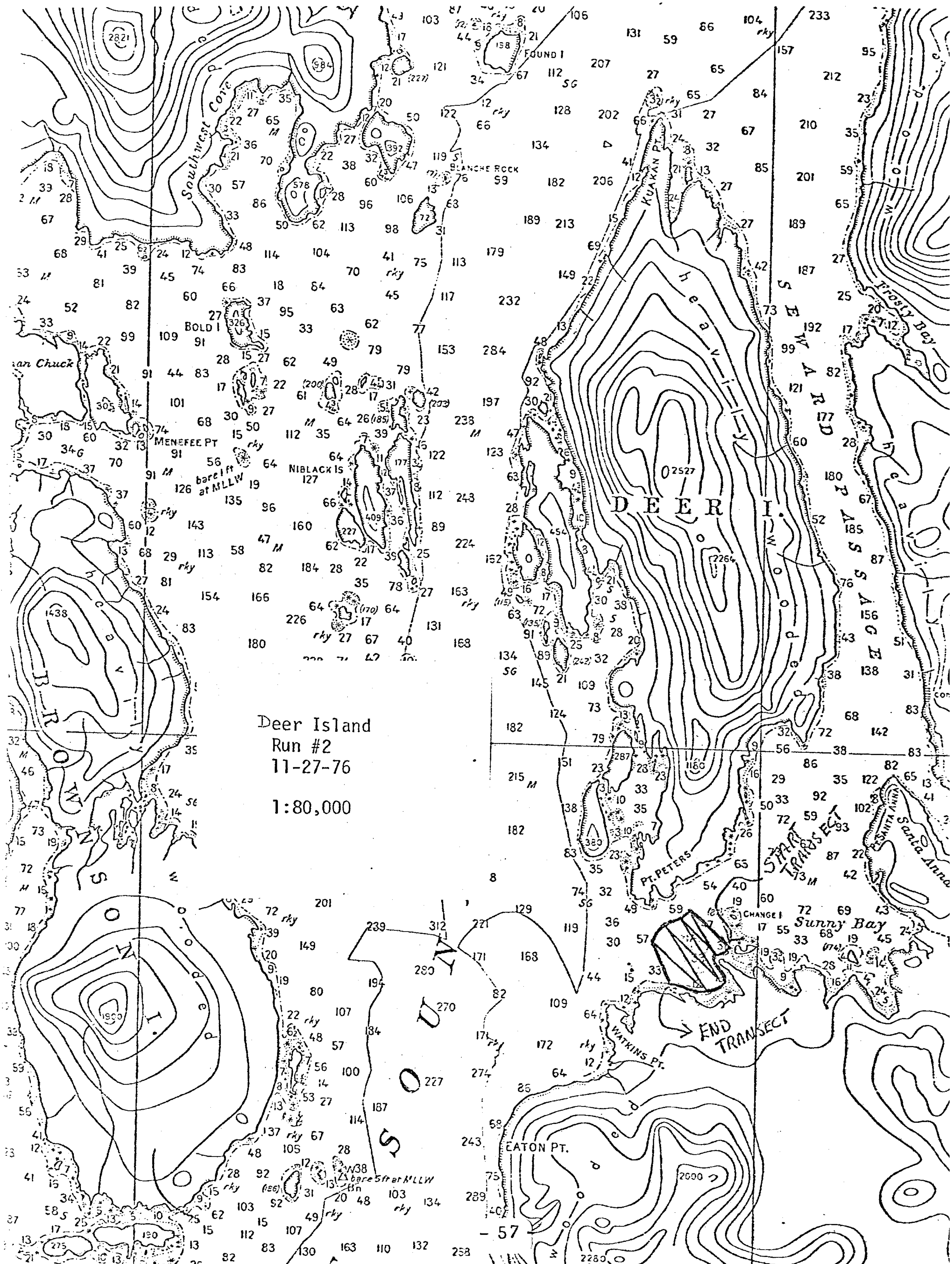
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Herring in one tight school, moving - makes setting up survey difficult. Small area, nice school, birds present.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Deer Island
Run #2
11-27-76

1:80,000

ACOUSTICAL SURVEY FORM

AREA Deer Island (Clupea Bight) Run# 4

Date 1-17-77 Vessel AUKLET

Operators Bergmann Tide Stage Ebb

GENERAL INFORMATION: Tape index 0969 → 0973

1/ Calibration tone side #1 - Tape index 0973 → 0990 Gain 7.0

0990 → 1005 6.45

→

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 1005 @ Gain 7.0

Log time of survey: Start 1915 End 1930 Total 14 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 2 until 1010 R. Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ 1055 on tape index

Taping of run ended @ 0881 on tape index

Calibration tone side #2 - Tape index 0881 → 0865 @ Gain 7.0

0865 → 0847 6.45

0847 → 0831 6.00

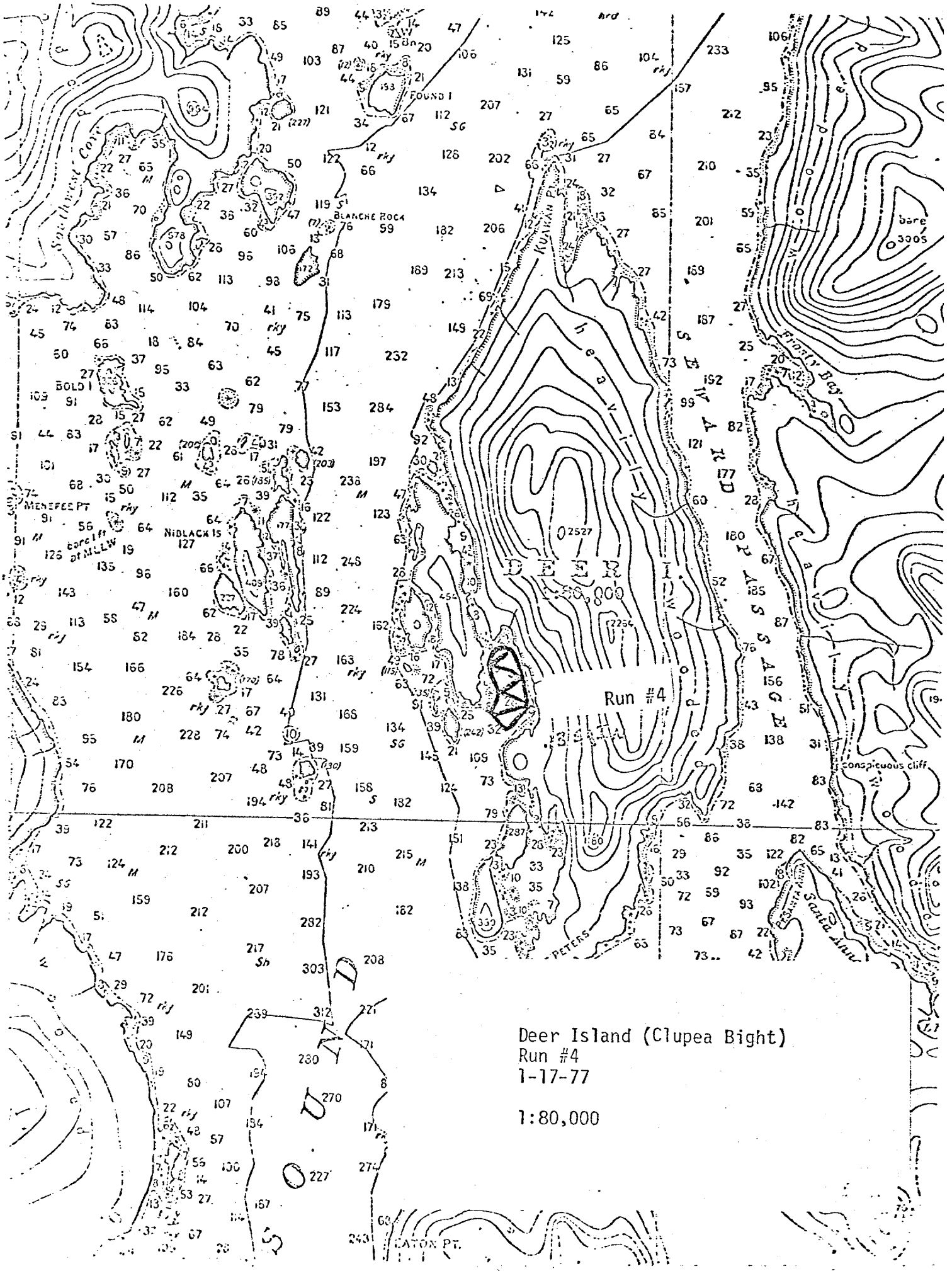
→

COMMENTS:

This was the only run out of 4,5, and 6 that transected the school at the mouht. This was also the only run done north & south or lengthwise. The school at the mouth was tight on the bottom so some will be lost.

330,321 sq. m. (0.08 sq. in.)

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Run #4
DEER ISLAND
Deer Island (Clupea Bight)
Run #4
1-17-77
1:80,000

ACOUSTICAL SURVEY FORM

AREA Deer Island (Clupea Bight) Run# 5

Date 1-17-77 Vessel AUKLET

Operators Bergmann Tide Stage

GENERAL INFORMATION: Tape index 0831 → 0821

1/ Calibration tone side #1 - Tape index 0881 → 0865 Gain 7.0

0865 → 0847 6.45

0847 → 0831 6.00

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0821 @ Gain 6.00

Log time of survey: Start End Total 18 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ - on tape index

Taping of run ended @ 0458 on tape index

Calibration tone side #2 - Tape index 0458 → 0433 @ Gain 6.00

0433 → 0410 6.45

→

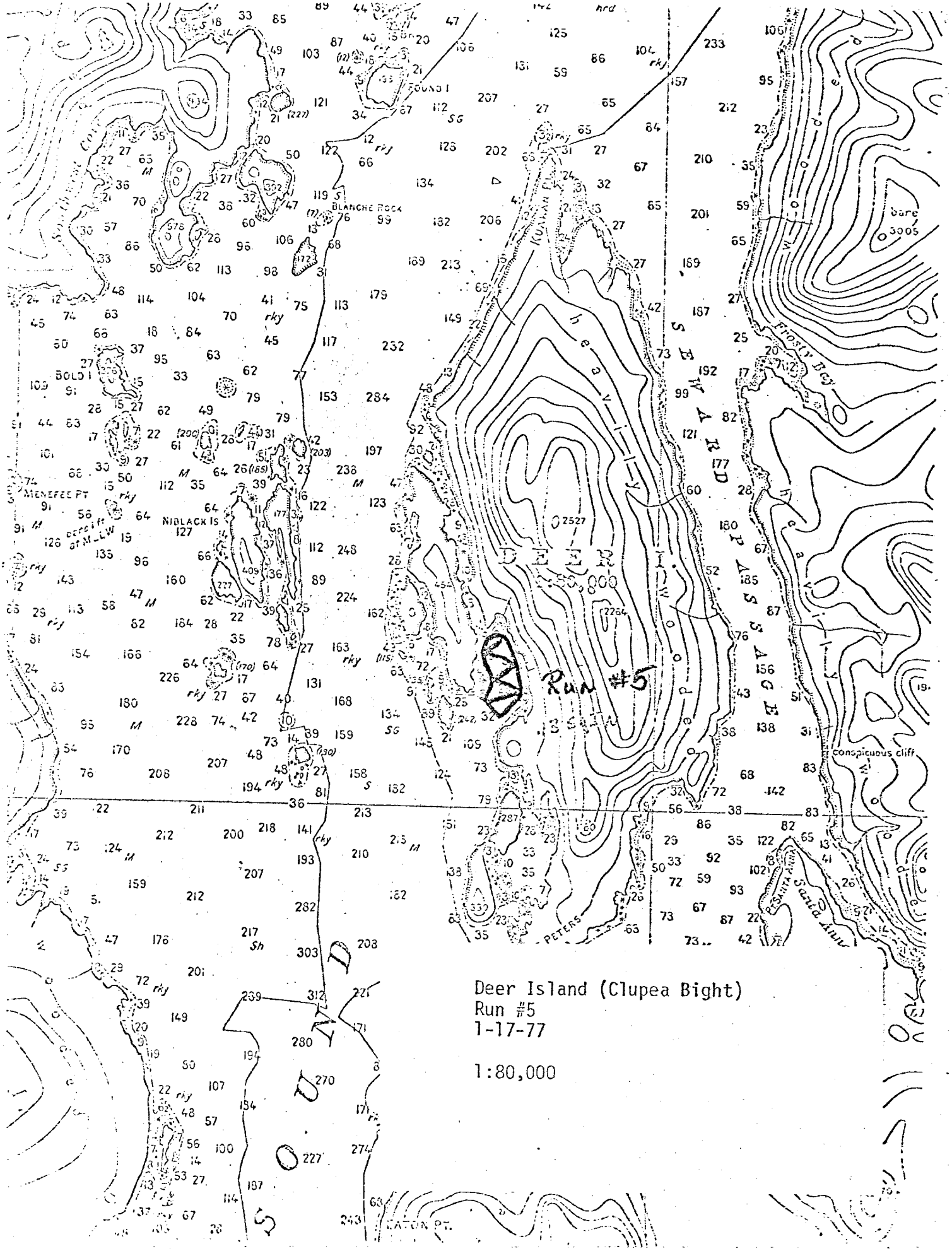
→

COMMENTS:

Good run, all herring off the bottom, only school at upper end of bay was transected.

536,773 sq. m. (.13 sq. in)

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Run #5
Deer Island (Clupea Bight)
Run #5
1-17-77
1:80,000

ACOUSTICAL SURVEY FORM

AREA Deer Island (Clupea Bight) Run# 6

Date 1-17-77 Vessel AUKLET

Operators Bergmann Tide Stage flooding

GENERAL INFORMATION: Tape index 0000 → 0015

1/ Calibration tone side #1 - Tape index 0015 → 0055 Gain 6.45

0055 → 0093 6.00

→

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0093 @ Gain 6.45

Log time of survey: Start 2005 End 2036 Total 26 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ -- on tape index

Taping of run ended @ 0610 on tape index

Calibration tone side #2 - Tape index 0610 → 0636 @ Gain 6.45

→

→

→

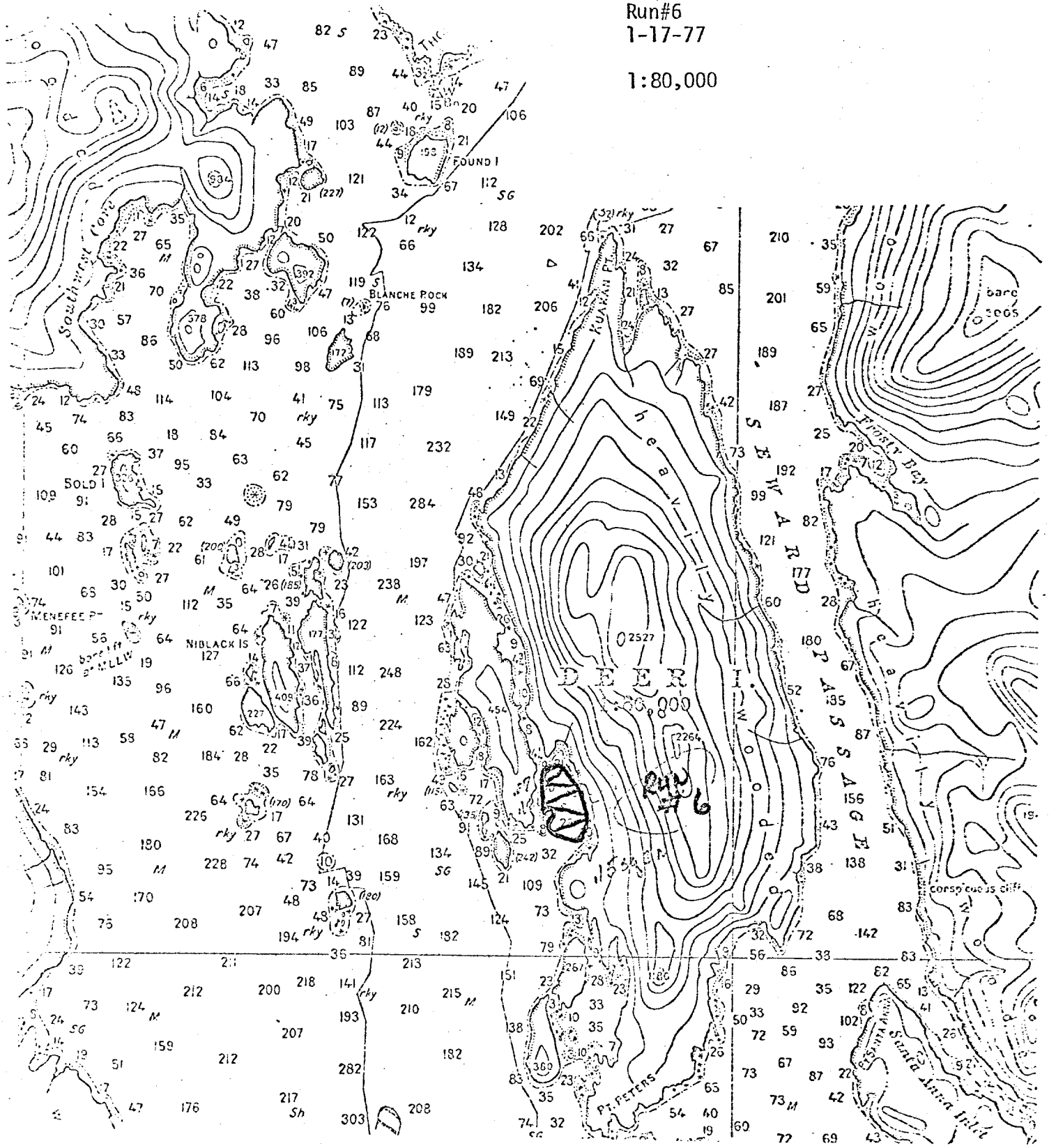
COMMENTS:

Last run in Clupea Bight, school out at mouth was not hit. Started at head of bight.
619,353 sq. m. (.15 sq. in)

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Deer Island (Clupea Bight)
Run#6
1-17-77

1:80,000



ACOUSTICAL SURVEY FORM

AREA Deer Island Run# 3

Date 1-18-77 Vessel AUKLET

Operators Bergmann Tide Stage flooding

GENERAL INFORMATION: Tape index 0000 → 0019

1/ Calibration tone side #1 - Tape index 0019 → 0063 Gain 7.0

0063 → 0100 6.40

0100 → 0135 6.00

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0135, 0555 @ Gain 7.0, 6.0

Log time of survey: Start 0810 End 0843 Total 33 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ -- on tape index

Taping of run ended @ 0555, 0884 on tape index

Calibration tone side #2 - Tape index 0884 → 0902 @ Gain 6.0

0903 → 0919 6.40

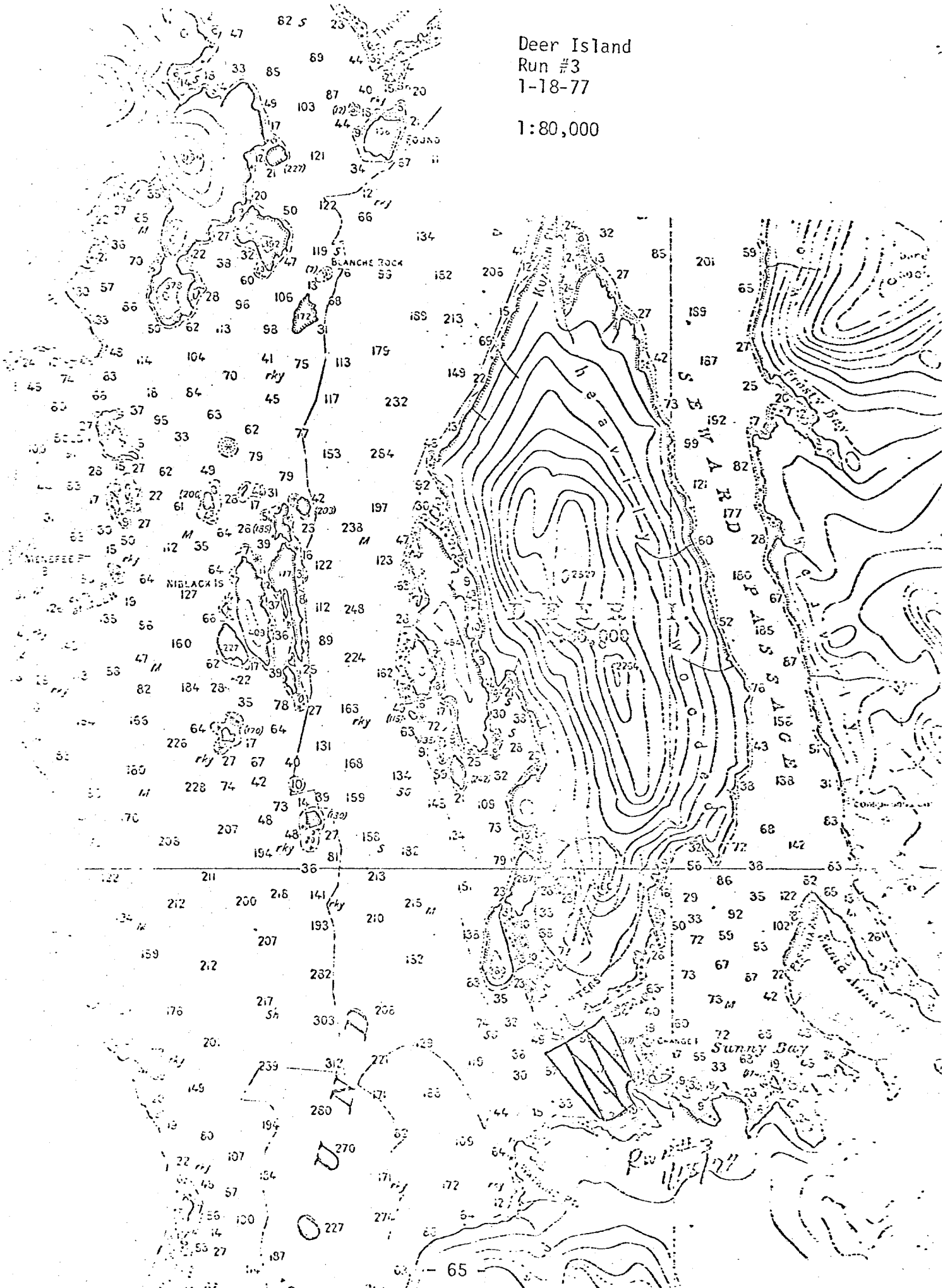
0919 → 0935 7.0

→

COMMENTS:

Run was larger than #1 and 2, schools were closer to Deer Island. This run probably included fish outside of the survey area in #1 and 2. Unfortunately, portions of three schools were on the bottom. Clupea Bight was checked immediately after run and fish surveyed there the previous night (1-17) were still there, only no longer accessible to the existing survey design. Run switched to gain 6 at 0555 tape. 1,362,578 sq. m. (.33 sq. in.)

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Deer Island
Run #3
1-18-77
1:80,000
BLANCHE ROCK
NIGLACK IS
Sunny Bay

ACOUSTICAL SURVEY FORM

AREA Deer Island Run# 4

Date 1-18-77 Vessel AUKLET

Operators Bergmann Tide Stage Ebbing

GENERAL INFORMATION: Tape index 0000 → 0018

1/ Calibration tone side #1 - Tape index 0031 → 0059 Gain 7.0

0066 → 0102 6.40

0102 → 0135 6.0

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0135, 0500, 0609 @ Gain 7, 6, 7

Log time of survey: Start 1800 End 1837 Total 37 min.

Attenuated @ -12 db Pulse length bng Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ - on tape index

Taping of run ended @ 0500, 0609, 0944 on tape index

Calibration tone side #2 - Tape index 0944 → 0959 @ Gain 7.0

0959 → 0974 6.40

0974 → 0989 6.00

→

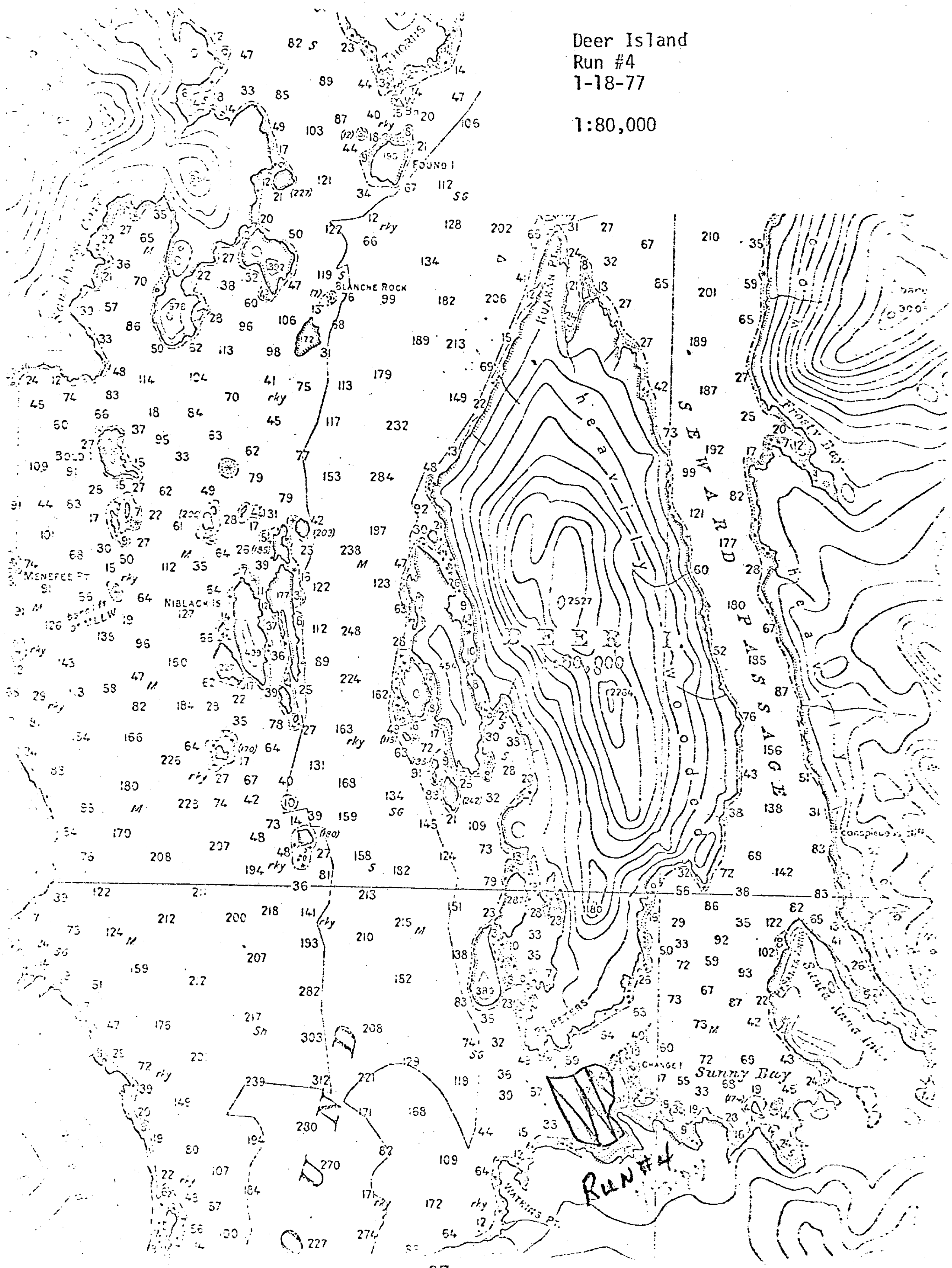
COMMENTS:

Best bottom separation of these three evening runs was made on this run. Unfortunately, towards the end of the run herring were again tight on the bottom. Best of run of the evening since fish were off bottom, but not much.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Deer Island
Run #4
1-18-77

1:80,000



ACOUSTICAL SURVEY FORM

AREA Deer Island Run# 2

Date 1-19-77 Vessel AUKLET

Operators Bergmann Tide Stage flooding

GENERAL INFORMATION: Tape index 0909 → 0903

1/ Calibration tone side #1 - Tape index 0945 → 0930 Gain 7.0

0930 → 0909 6.45

0602 → 0623 6.0

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0903, 0850, 0440 @ Gain 7.0

Log time of survey: Start 0815 End 0842 Total 27 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ -- on tape index

Taping of run ended @ 0850, 0440, 0345 on tape index

Calibration tone side #2 - Tape index 0345 → 0316 @ Gain 6.00

0316 → 0289 6.45

0289 → 0260 7.00

→

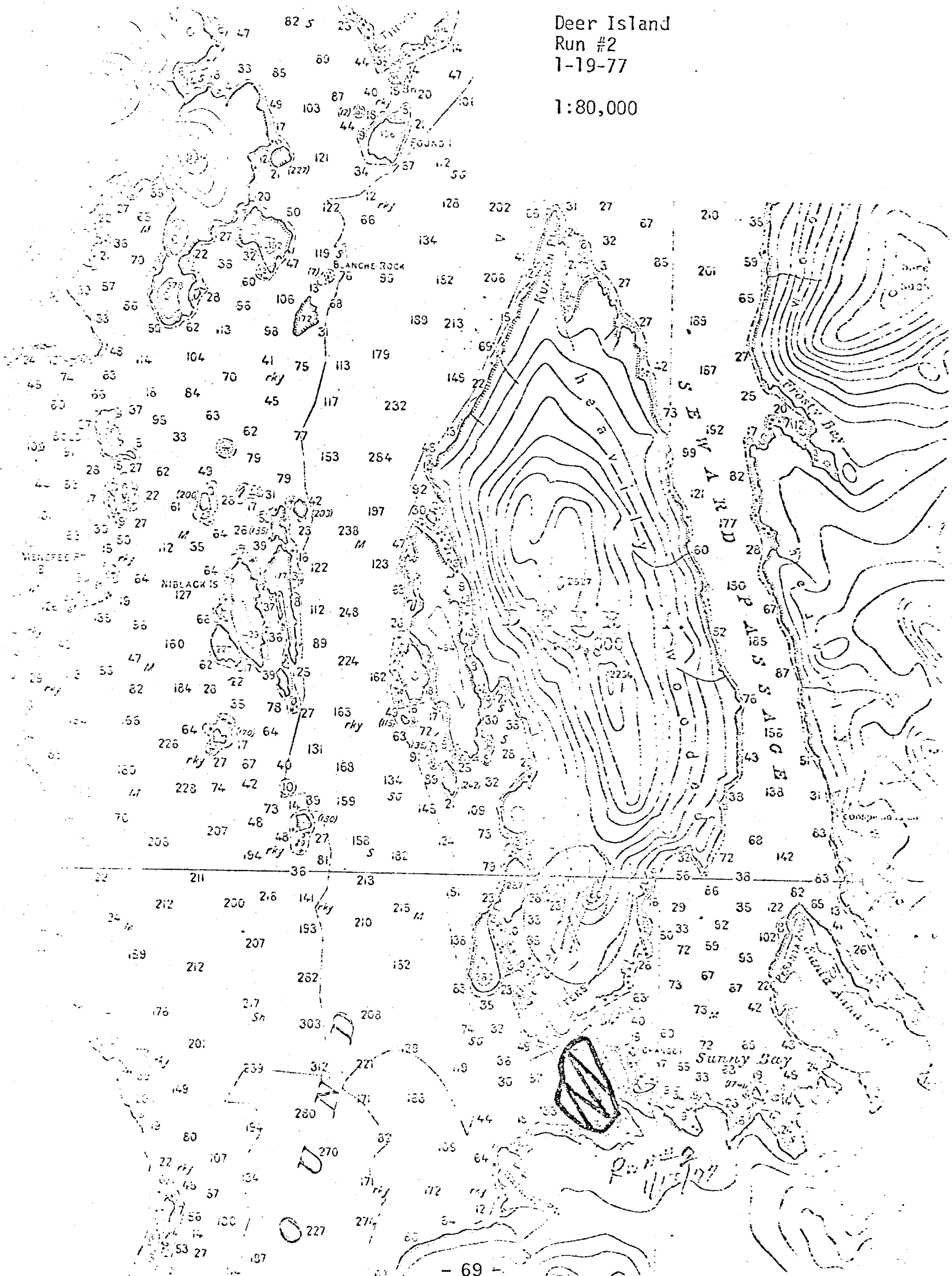
COMMENTS:

Good run. Almost all schools off bottom and outside of 10 fathom curve. 867,095 sq. m. (.21 sq. in). Fish denser and in tighter schools than previous run.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Deer Island
Run #2
1-19-77

1:80,000



ACOUSTICAL SURVEY FORM

AREA Deer Island (Change Is. Cove) Run# 1

Date 1-27-77 Vessel AUKLET

Operators Bracken Tide Stage ebbing

GENERAL INFORMATION: Tape index 0000 → 0019

1/ Calibration tone side #1 - Tape index 0019 → 0061 Gain 6.0

0060 → 0104 6.5

0106 → 0145 7.0

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0146 @ Gain 6.5
0360 6.0

Log time of survey: Start 0741 End 0802 Total 21 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse 205 VPP Blk & Shield

Tape reversed @ -- on tape index

Taping of run ended @ 0360 & 0700 on tape index

Calibration tone side #2 - Tape index 0703 → 0723 @ Gain 6.0

0725 → 0745 6.5

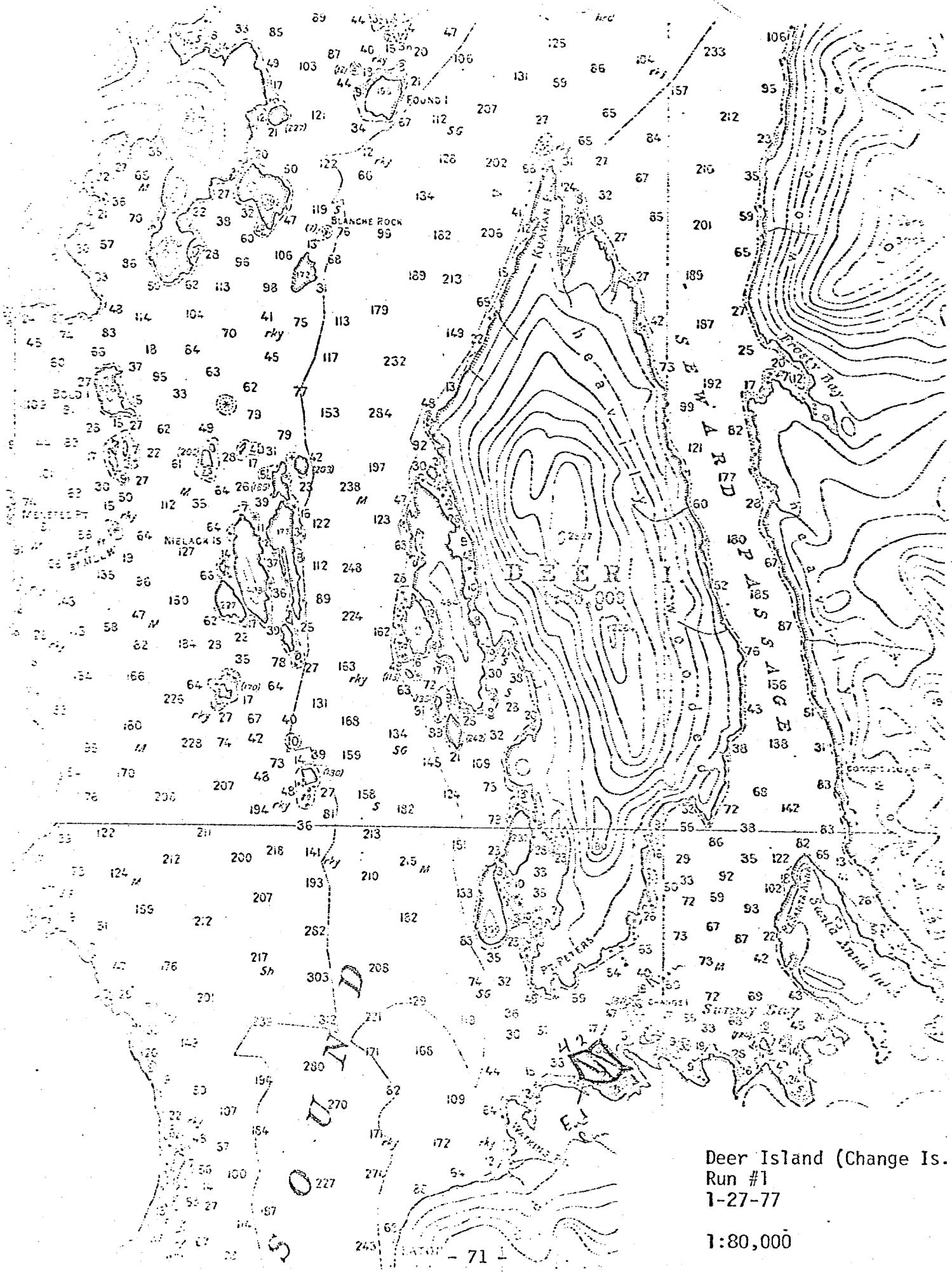
→

→

COMMENTS:

Sample area small, density heavy, good run.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Deer Island (Change Is.
Run #1
1-27-77
1:80,000

ACOUSTICAL SURVEY FORM

AREA Deer Island (Change Is. Cove) Run# 2

Date 1-27-77 Vessel AUKLET

Operators Bracken Tide Stage ebbing

GENERAL INFORMATION: Tape index _____ → _____

1/ Calibration tone side #1 - Tape index 0703 → 0723 Gain 6.0

0725 → 0745 6.5

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0746 @ Gain 6.5

0985 6.0

Log time of survey: Start 0810 End 0840 Total 30 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse 205 VPP Blk & Shield

Tape reversed @ 1045 on tape index

Taping of run ended @ 0984 & 0840 on tape index

Calibration tone side #2 - Tape index 0839 → 0821 @ Gain 6.0

0820 → 0802 6.5

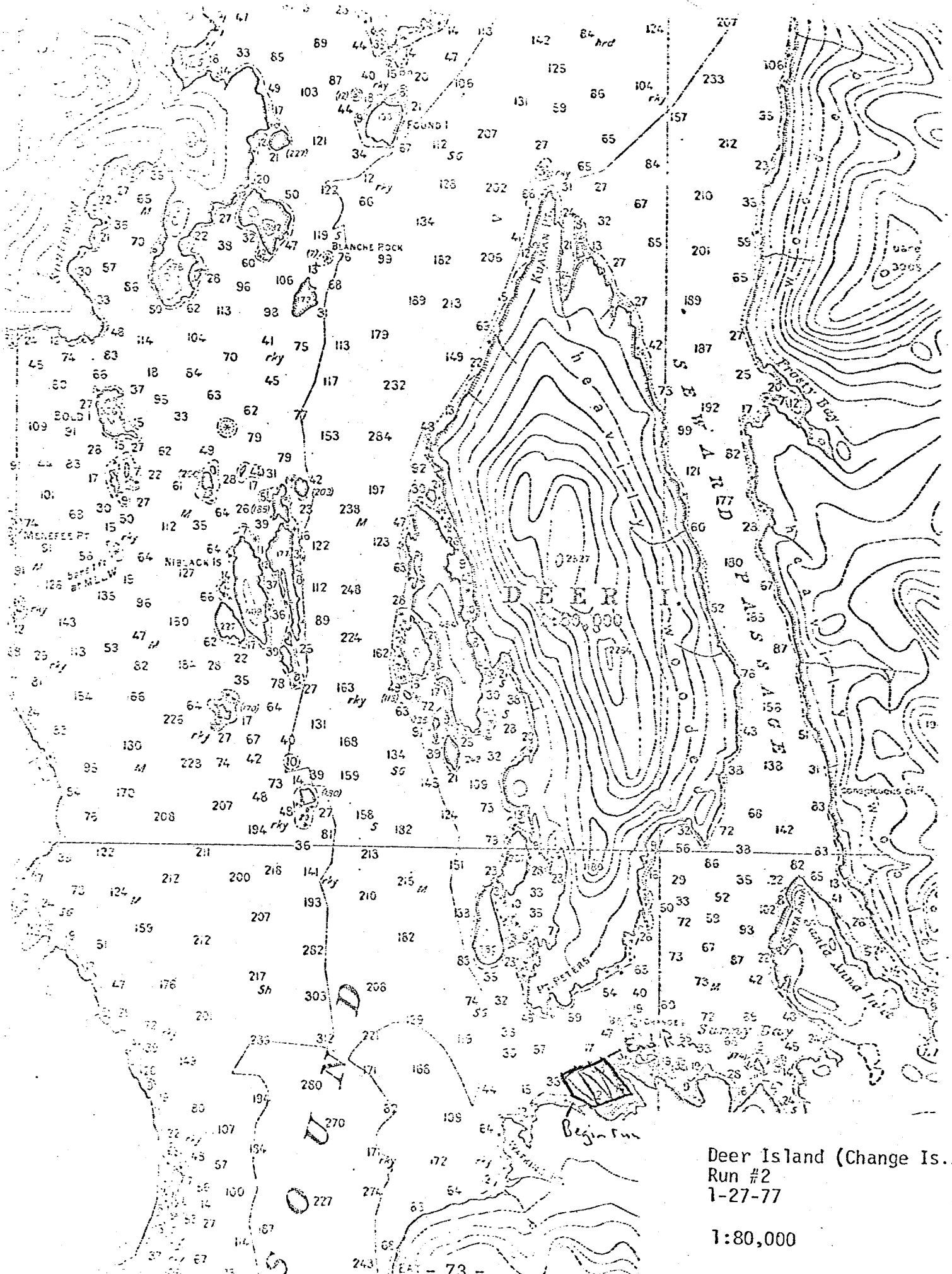
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Transect area small, herring near the bottom. Expect estimate to be small. Also sensitivity or gain high resulting in an expected low biomass.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


DEER
Deer Island (Change Is..
Run #2
1-27-77
1:80,000

ACOUSTICAL SURVEY FORM

AREA Fools Inlet Run# 1

Date 1-26-77 Vessel AUKLET

Operators Bracken Tide Stage ebbing

GENERAL INFORMATION: Tape index 0000 → 0013

1/ Calibration tone side #1 - Tape index 0013 → 0062 Gain 6.0

0070 → 0105 6.5

0110 → 0145 7.0

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0150 @ Gain 7.0

Log time of survey: Start 0800 End 0910 Total 70 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 205 VPP Blk & Shie

Tape reversed @ 1045 on tape index

Taping of run ended @ 0530 on tape index

Calibration tone side #2 - Tape index 0527 → 0503 @ Gain 7.0

→

→

→

COMMENTS:

Concentration of fish located differently from previous evening. Run should include virtually all Fools Inlet herring. Herring signals from computer indicate saturation resulting in an expected underestimate of biomass.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Fools Inlet
Run #1
1-26-77

1:80,000

ACOUSTICAL SURVEY FORM

AREA Port Camden Run# 1

Date 10-11-76 Vessel AUKLET

Operators Bergmann, Bracken Tide Stage Ebb

GENERAL INFORMATION: Tape index 0000 → 0163

1/ Calibration tone side #1 - Tape index 0036 → 0084 Gain 6.55

0084 → 0131 5.0

→

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0131 @ Gain 5.0

Log time of survey: Start 2154 End 2252 Total 58 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ 1030 on tape index

Taping of run ended @ 0799 on tape index

Calibration tone side #2 - Tape index 0799 → 0781 @ Gain 5.0

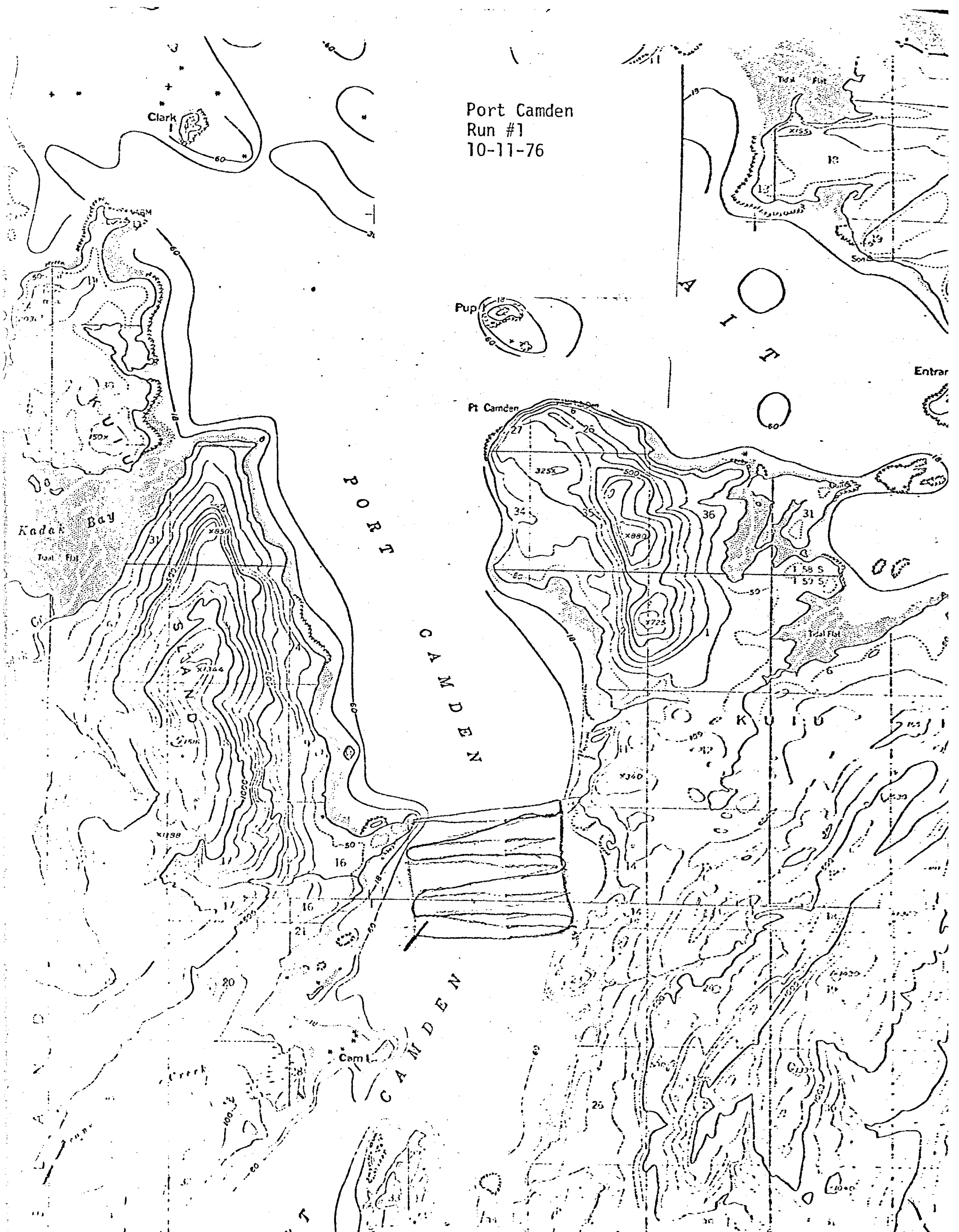
0781 → 0763 6.55

→

→

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Port Camden
Run #1
10-11-76
Clark
Pup
Pt Camden
PORT CAMDEN
Kadak Bay
Tidal Flat
KUIU
ISLAND
Entran
CAMDEN

ACOUSTICAL SURVEY FORM

AREA Port Camden Run# 1

Date 10-28-76 Vessel AUKLET

Operators Bergmann, Bracken Tide Stage Flood

GENERAL INFORMATION: Tape index 0000 → 00032

1/ Calibration tone side #1 - Tape index 0033 → 0072 Gain 6.95

0072 → 0111 6.00

0745 → 0725 6.95

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0111 @ Gain 6.00

Log time of survey: Start 1729 End 1841 Total 72 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4.0 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ 1040 on tape index

Taping of run ended @ 0745 on tape index

Calibration tone side #2 - Tape index 0555 → 0513 @ Gain 6.95

0513 → 0472 6.00

→

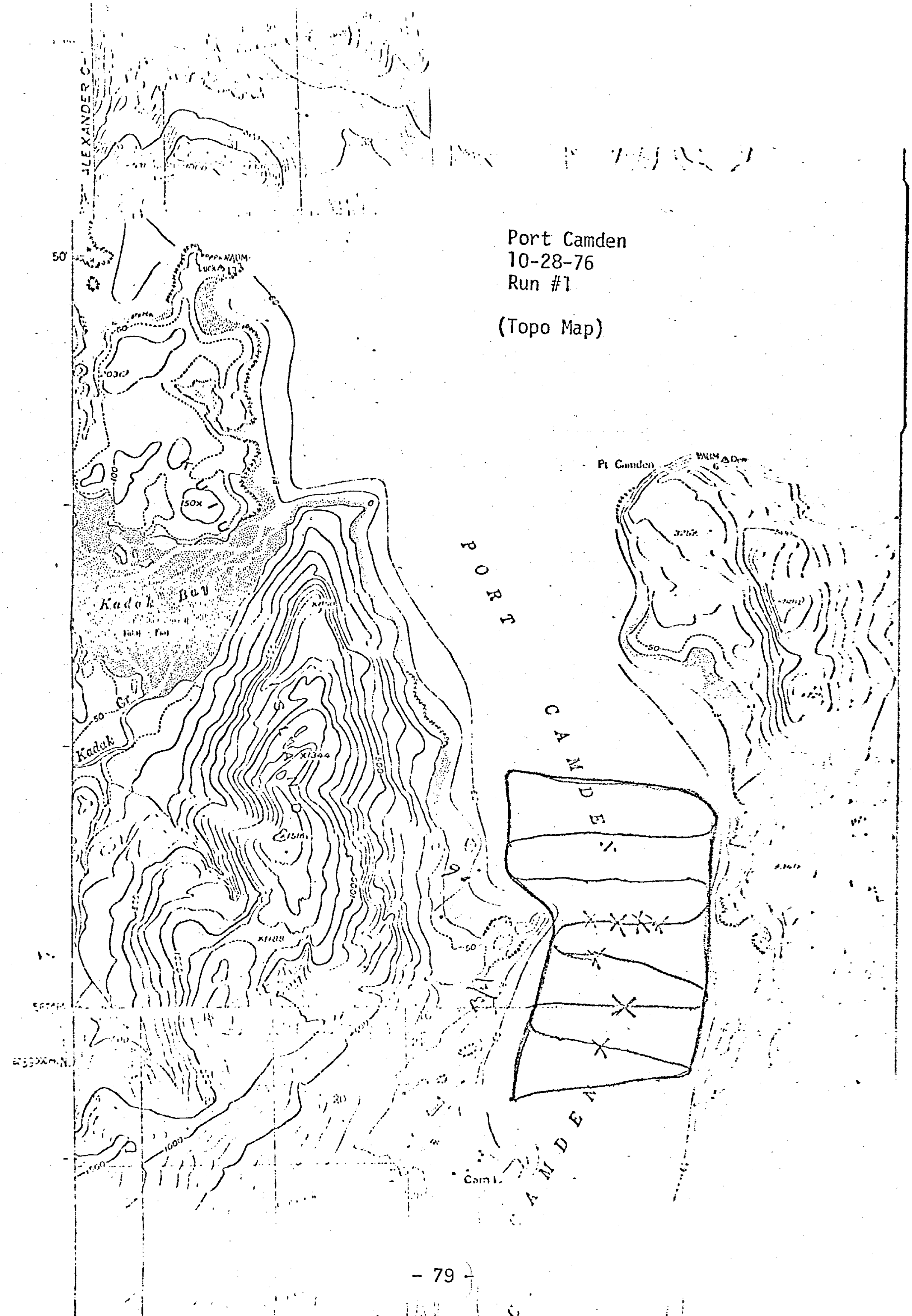
→

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Port Camden
10-28-76
Run #1

(Topo Map)



ACOUSTICAL SURVEY FORM

AREA Port Camden Run# 2

Date 10-28-76 Vessel AUKLET

Operators Bergmann, Bracken Tide Stage ebbing

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0067 Gain 7.0

Side #1 0540 → 0558 7.0

Side #2 0862 → 0835 6.0

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0558 & 0835 @ Gain 7.0 & 6.0

Log time of survey: Start 1957 End 2056 Total 59 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ 1057 on tape index

Taping of run ended @ 0862 & 0546 on tape index

Calibration tone side #2 - Tape index 0546 → 0520 @ Gain 6.0

Side #2 0519 → 0485 7.0

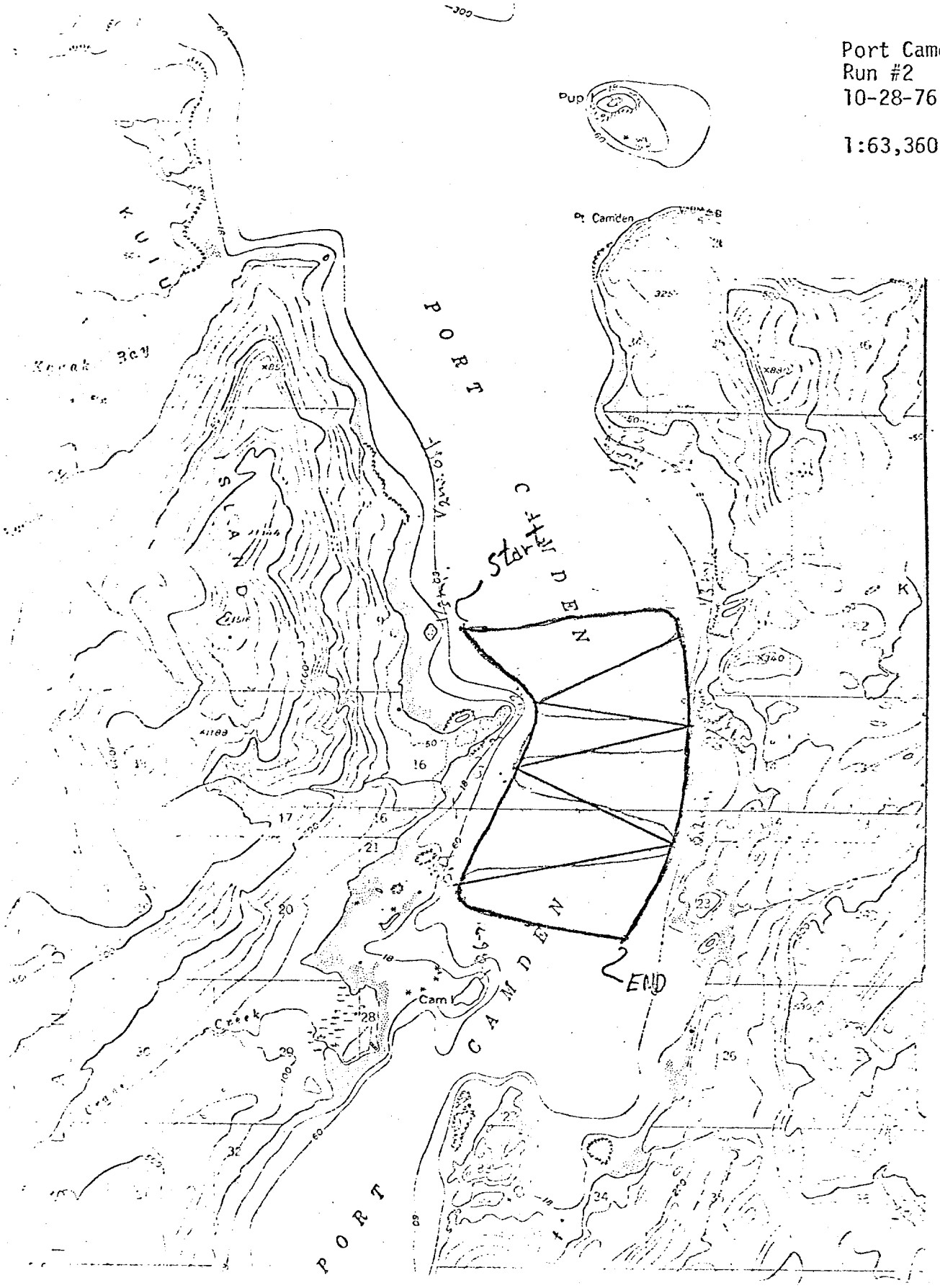
→

→

COMMENTS:

Run calibrated TEAC at gain 7.0. This run was began further out in the bay due t dinner between runs and outgoing tides. No schools were recorded, or observed on Wesmar, so since schools hadn't backed out first two transects were cut out of sur area. Fish were in lighter - less dense - schools during this survey and not as many fish were observed or recorded. This #2 survey was also not run in as close a transect.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Port Camden
Run #2
10-28-76
1:63,360
Pup
Pt Camden
PORT CAMDEN
Start
END
Cam I
Creek

ACOUSTICAL SURVEY FORM

AREA Port Camden Run# 1

Date 12-29-76 Vessel AUKLET

Operators Bracken Tide Stage

GENERAL INFORMATION: Tape index 0011 → 0024

1/ Calibration tone side #1 - Tape index 0024 → 0065 Gain 7.0

0070 → 0106 6.0

0110 → 0144 5.0

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0144 @ Gain 6.0

Log time of survey: Start End Total

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 116 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ 1041 on tape index

Taping of run ended @ 0755 on tape index

Calibration tone side #2 - Tape index 0750 → 0730 @ Gain 6.0

→

→

→

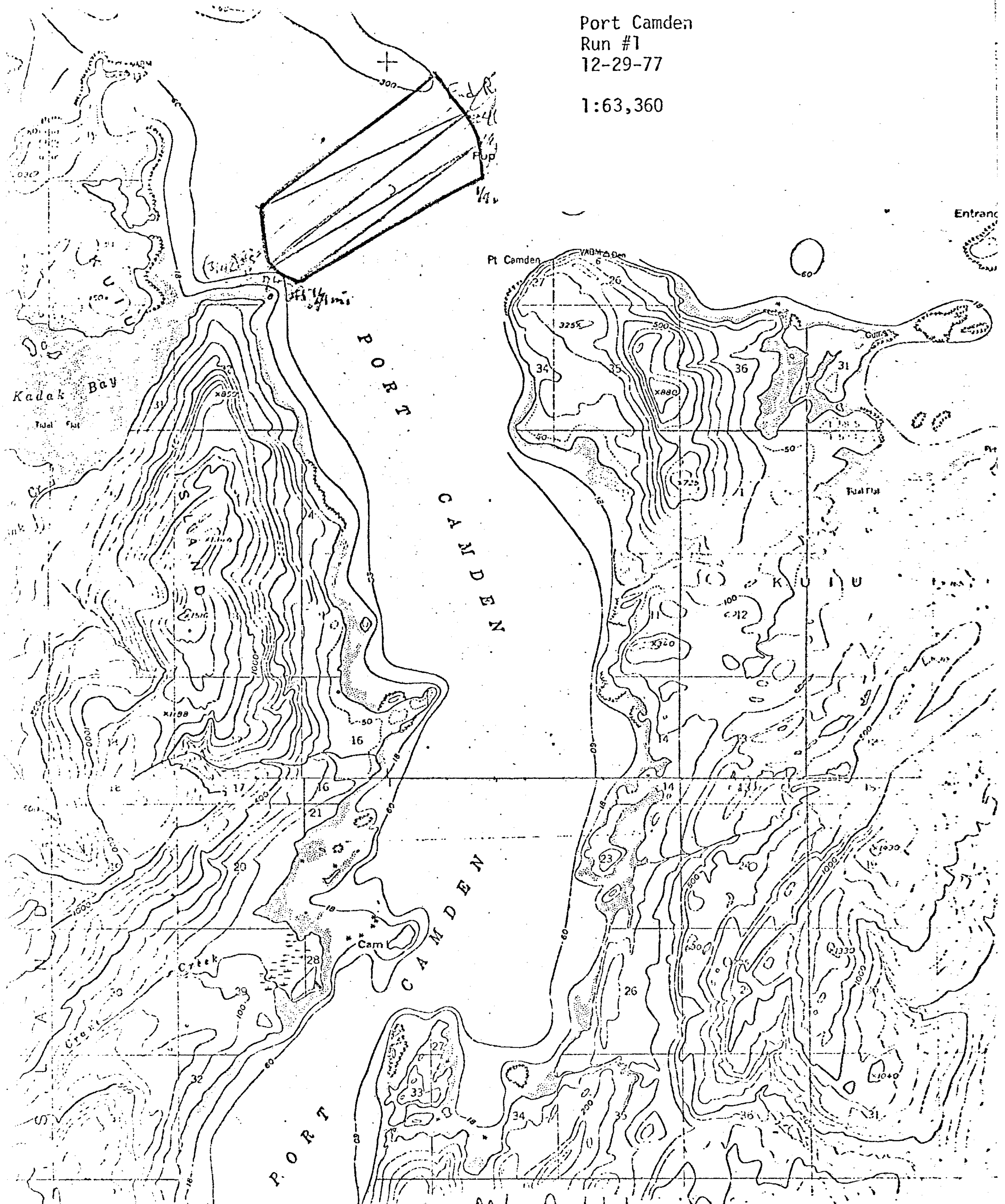
COMMENTS:

Fish scattered badly as run was being conducted. This run is not indicative of the number of fish observed.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Port Camden
Run #1
12-29-77

1:63,360



M/U Auklet
Run #1 12/29/76

Scale 1:63360

ACOUSTICAL SURVEY FORM

AREA Pt. Camden Run# 2

Date 2-14-77 Vessel AUKLET

Operators Bracken Tide Stage

GENERAL INFORMATION: Tape index 0980 → 0281

1/ Calibration tone side #1 - Tape index 0982 → 0965 Gain 6.0

→ →

→ →

→ →

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0960 @ Gain 6.0

Log time of survey: Start 1935 End 2009 Total 34 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse 210 VPP Blk & Shie

Tape reversed @ -- on tape index

Taping of run ended @ 0312 on tape index

Calibration tone side #2 - Tape index 0310 → 0281 @ Gain 6.0

→ →

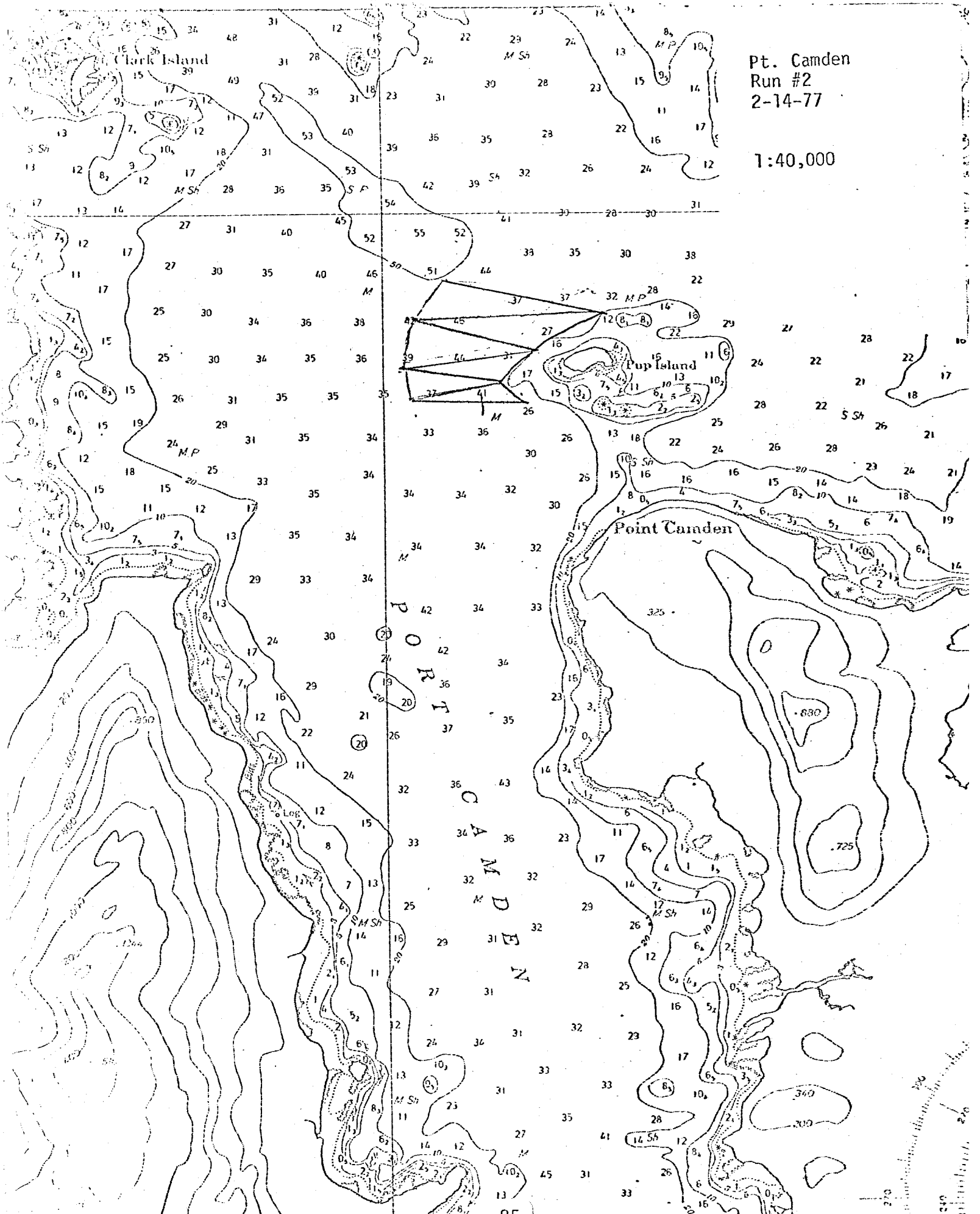
→ →

→ →

COMMENTS:

This run is very representative of the Pt. Camden herring stock during the observation period - Feb. 13 -15.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Pt. Camden
Run #2
2-14-77
1:40,000
Clark Island
Pup Island
Point Camden
PORT CAMDEN

ACOUSTICAL SURVEY FORM

AREA Fritz Cove Run# 2

Date 12-27-76 Vessel NMFS SEARCHER

Operators Dahlberg & Krieger Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0026 → 0066 Gain 3.2

0126 → 0162 3.2

→

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0072 @ Gain 3.2

Log time of survey: Start 1320 End 1410 Total 50 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage

Calibration osc setting 500 mv Transmit pulse 280 VPP White & Sh
275 VPP Black & Sh

Tape reversed @ 0990 on tape index

Taping of run ended @ 0912 on tape index

Calibration tone side #2 - Tape index 0992 → 1009 @ Gain 3.2

1008 → 0993 3.2

0914 → 0898 3.2

→

COMMENTS:

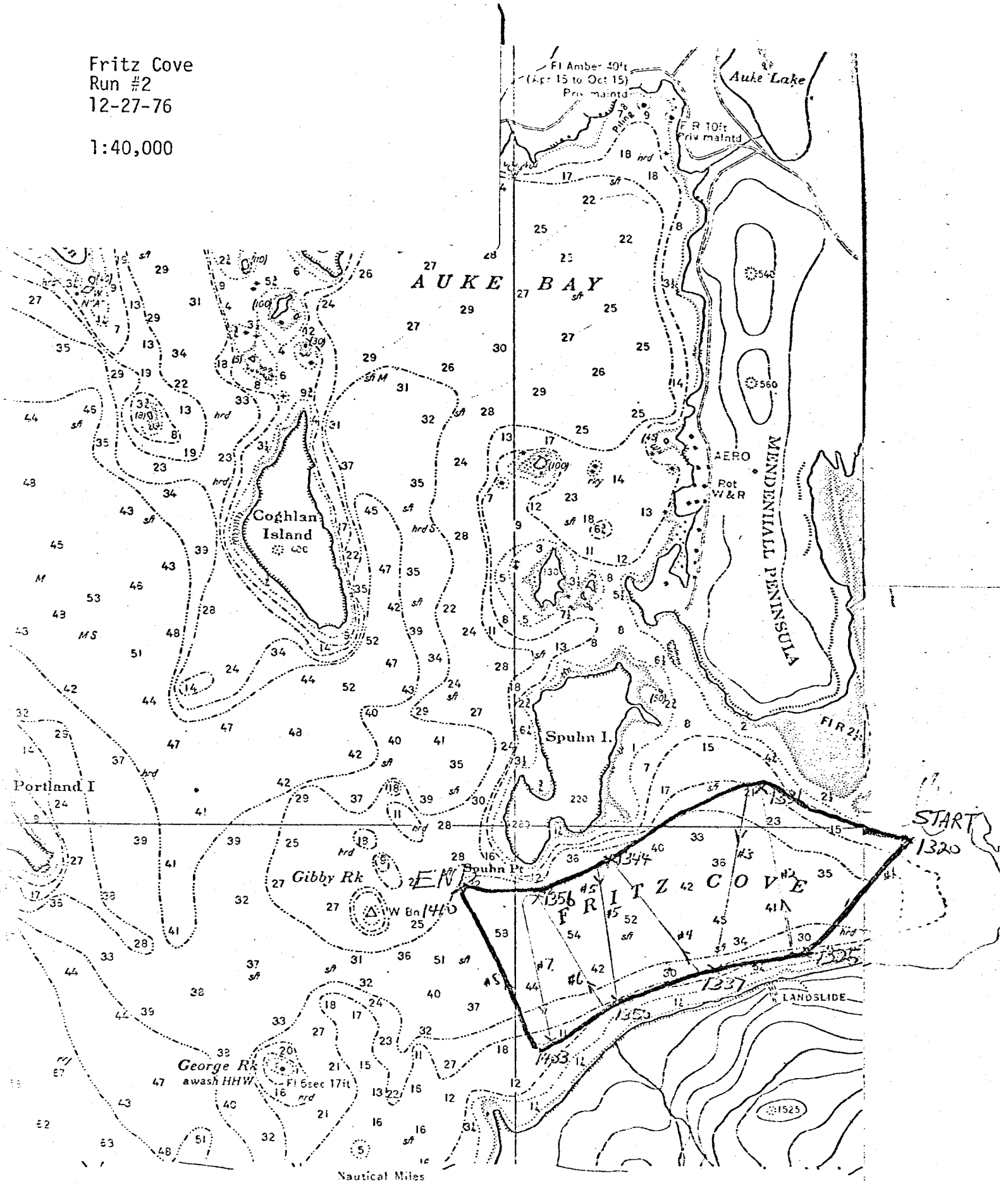
Noise encountered in interface amplifier show on back possibly interfers with analysis.

Enclosing calibration data for transducer serial #331.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Fritz Cove
Run #2
12-27-76

1:40,000



ACOUSTICAL SURVEY FORM

AREA Fritz Cove Run# 1

Date 1-5-77 Vessel NMFS MURRE II

Operators Dahlberg, Krieger Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0040

1/ Calibration tone side #1 - Tape index 0040 → 0083 Gain 3.5

Reel 1 0983 → 0999 3.5

0000 → 0044 3.5

Reel 2 0972 → 0987 3.5

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0085 @ Gain 3.5 Reel

Log time of survey: Start 1100 End 1336 Total 156 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage

260 VPP white & S

Calibration osc setting 500 mv Transmit pulse 250 VPP black & S

Tape reversed @ 0999 on tape index

Taping of run ended @ 0445 on tape index Reel 2

Calibration tone side #2 - Tape index 0999 → 0983 @ Gain 3.5

Reel 1 0218 → 0185 3.5

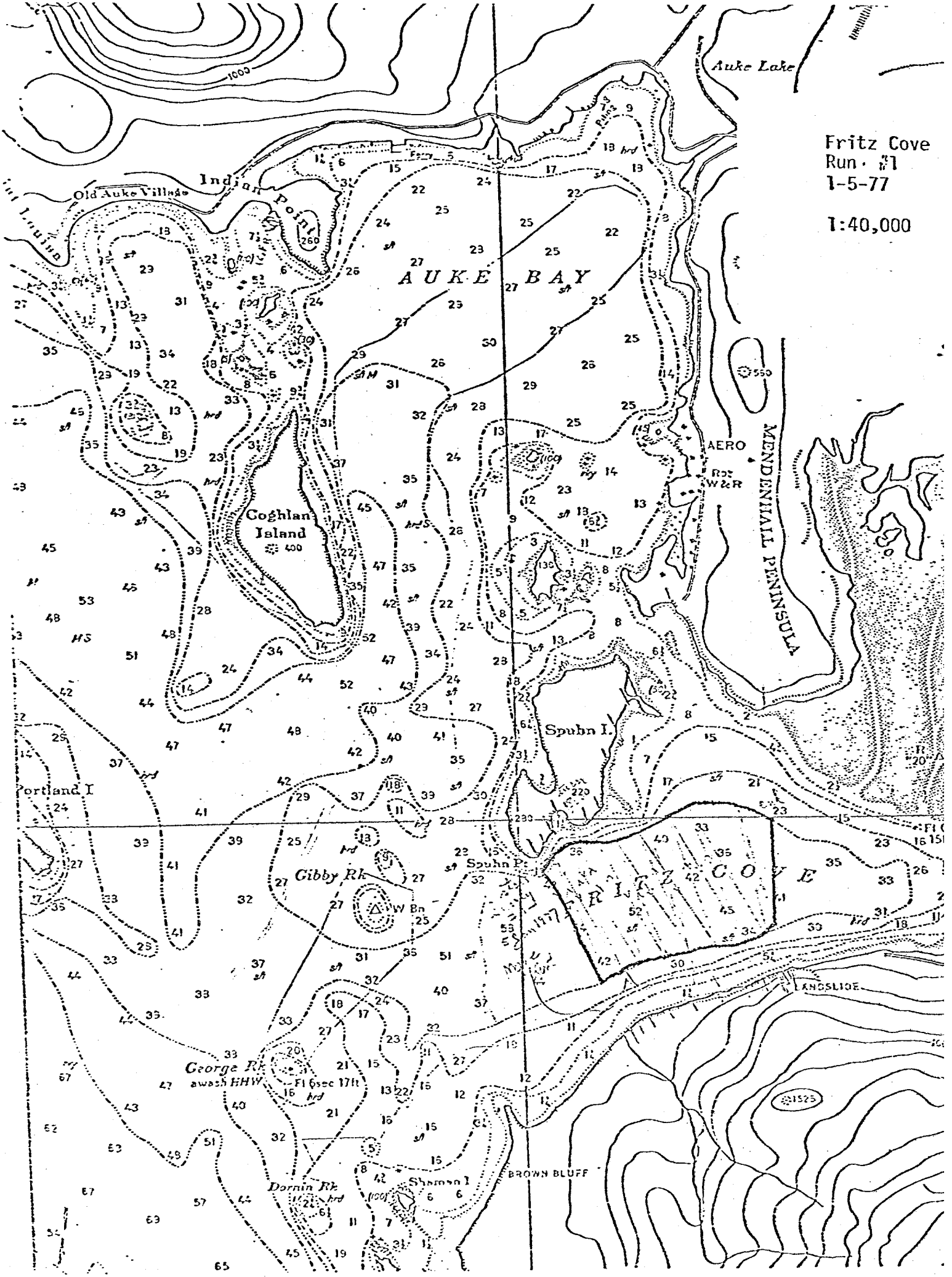
Reel 2 0988 → 0971 3.5

→

COMMENTS:

Transect #7 overlapped #6 due to navigational error. Transducer serial number 33 used.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Auke Lake
Fritz Cove
Run · 31
1-5-77
1:40,000
Old Auke Village
Indian Point
AUKE BAY
Coghlan Island
MENDENHALL PENINSULA
AERO
Spuhn I.
Portland I
Gibby Rk
Spuhn Pt
FRITZ COVE
LANDSLIDE
George Rk
awash HHW
Fl 6sec 17ft
Dornin Rk
Sherman I
BROWN BLUFF

ACOUSTICAL SURVEY FORM

AREA Fritz Cove Run# 1

Date 1-10-77 Vessel NMFS SEARCHER

Operators Krieger Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0036

1/ Calibration tone side #1 - Tape index 0037 → 0079 Gain 3.2

0082 → 0119 3.2

0930 → 0946 3.2

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0285 @ Gain 3.2

Log time of survey: Start 1511 End 1609 Total 58 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage

Calibration osc setting 500 mv Transmit pulse 270 VPP White & S. 255 VPP Black & S.

Tape reversed @ 0946 on tape index

Taping of run ended @ 0636 on tape index

Calibration tone side #2 - Tape index 0946 → 0930 @ Gain 3.2

0623 → 0602 3.2

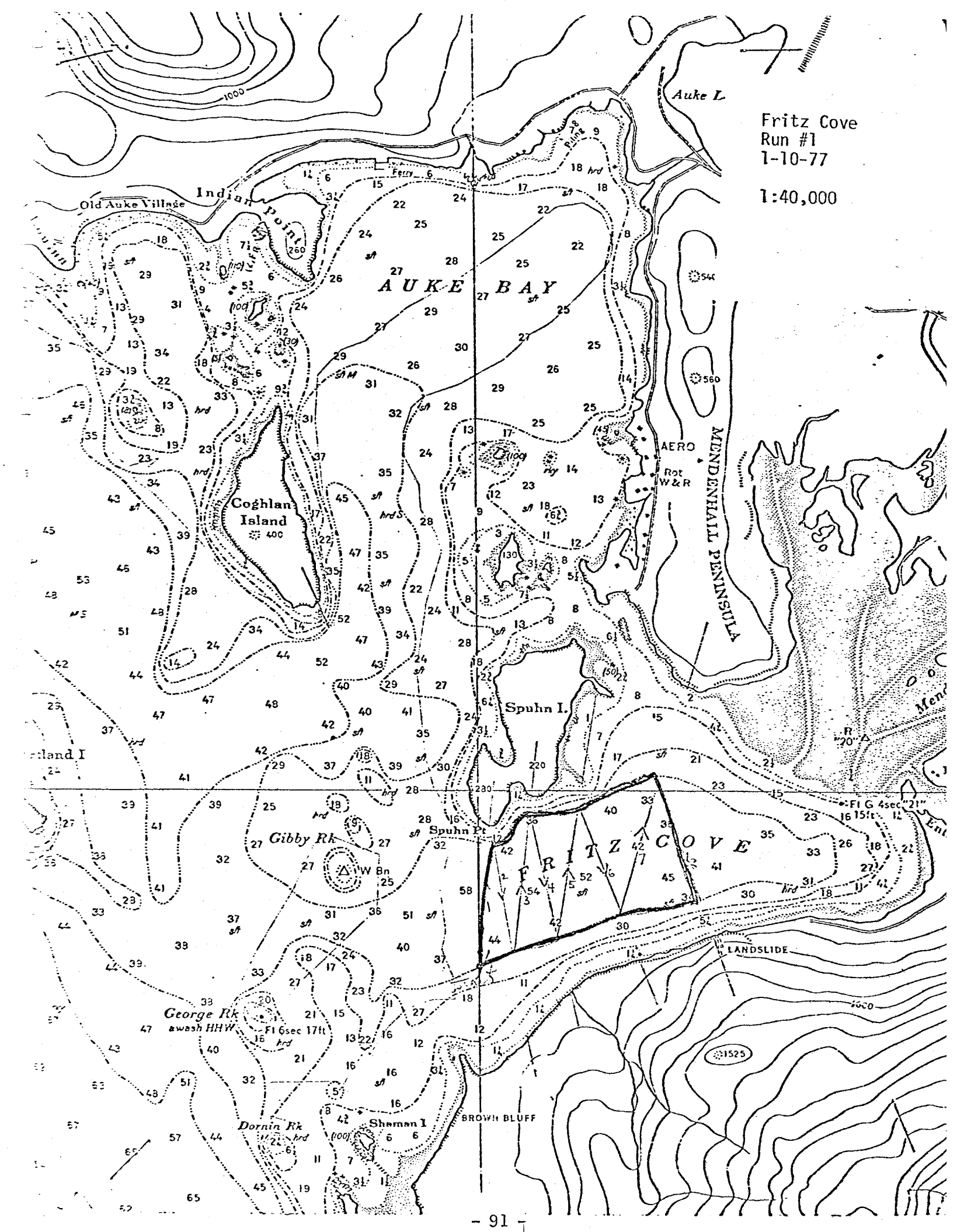
→

→

COMMENTS:

Boat speed constant 1200 rpms.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Fritz Cove
Run #1
1-10-77
1:40,000
Auke L
Old Auke Village
Indian Point
AUKE BAY
Coghlan Island
AERO
MENDENHALL PENINSULA
Spuhn I.
Spuhn Pt
Gibby Rk
W Bn
FRITZ COVE
LANDSLIDE
George Rk
awash HHW
Fl 6sec 17ft
Dornin Rk
Sherman I
BROWN BLUFF
Fl G 4sec "21"

ACOUSTICAL SURVEY FORM

AREA Fritz Cove Run# 1

Date 1-11-77 Vessel NMFS SEARCHER

Operators Krieger Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0036

1/ Calibration tone side #1 - Tape index 0036 → 0076 Gain 3.5

0991 → 1006 3.5

→

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0076 @ Gain 3.5

Log time of survey: Start 1113 End 1216 Total 63 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4. Input voltage

Calibration osc setting 500 mv Transmit pulse 275 VPP white 265 VPP black

Tape reversed @ 1006 on tape index

Taping of run ended @ 0700 on tape index

Calibration tone side #2 - Tape index 1006 → 0990 @ Gain 3.5

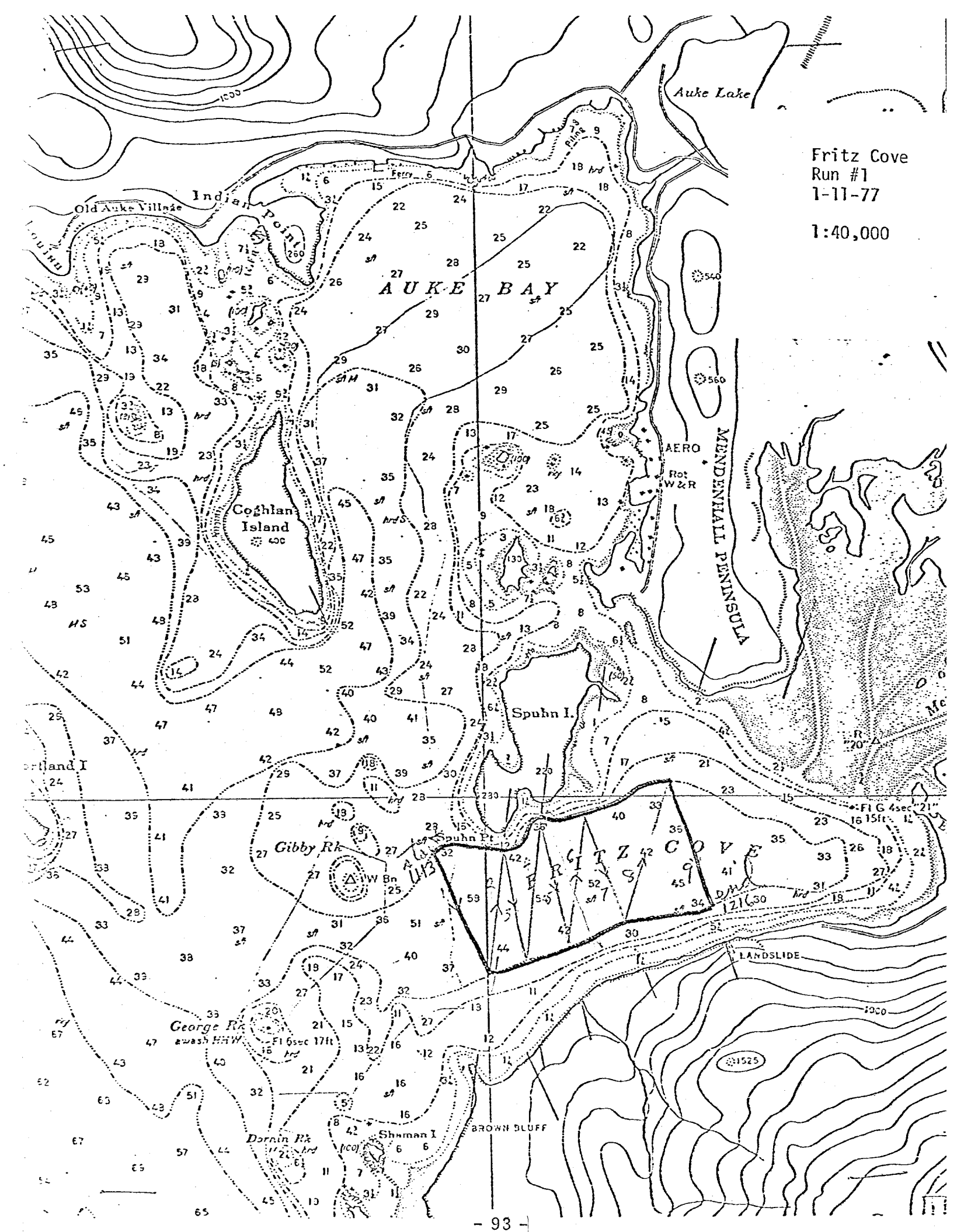
0700 → 0679 3.5

→

→

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Auke Lake
Fritz Cove
Run #1
1-11-77
1:40,000
Old Auke Village
Indian Point
AUKE BAY
Coghlan Island
MENDENHALL PENINSULA
AERO
Rot
W&R
Spuhn I.
Spuhn Pt
Gibby Rk
FIW Bn
FRITZ COVE
LANDSLIDE
George Rk
awash MHW
Fl 6sec 17ft
Dornin Rk
Sherman I
BROWN BLUFF
Fl G 4sec 21ft
16 15ft

ACOUSTICAL SURVEY FORM

AREA Fritz Cove Run# 2

Date 1-11-76 Vessel NMFS SEARCHER

Operators Frieger Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0034

1/ Calibration tone side #1 - Tape index 0036 → 0074 Gain 3.5

0100 → 0137 3.5

0970 → 0986 3.5

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0986 @ Gain 3.5

Log time of survey: Start 1243 End 1400 Total 77 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage

Calibration osc setting 500 mv Transmit pulse 275 VPP white 265 VPP black

Tape reversed @ 0986 on tape index

Taping of run ended @ 0247 on tape index

Calibration tone side #2 - Tape index 0986 → 0971 @ Gain 3.5

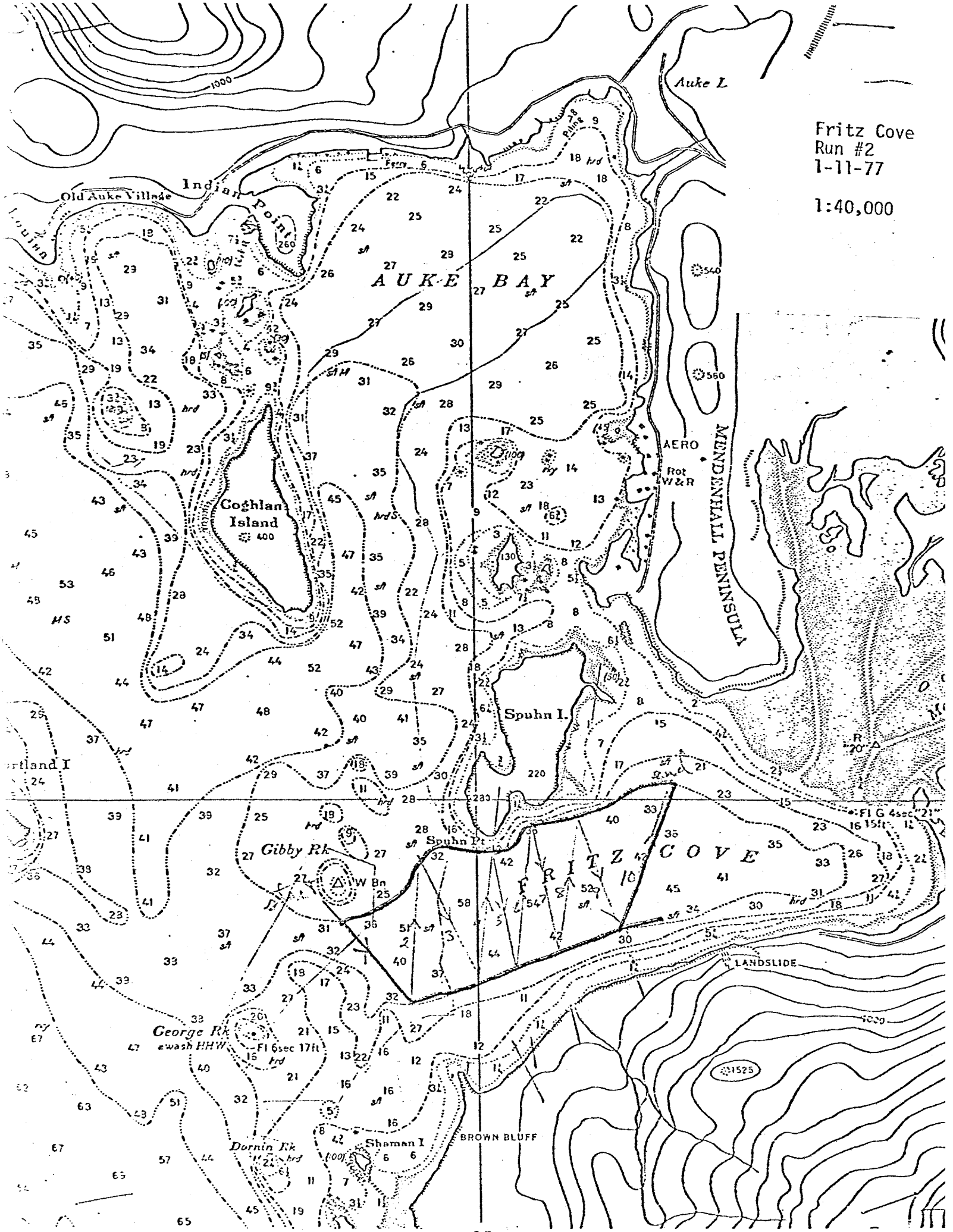
0247 → 0216 3.5

→

→

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Fritz Cove
Run #2
1-11-77
1:40,000
Auke L
Old Auke Village
Indian Point
AUKE BAY
Coghlan Island
MENDENHALL PENINSULA
AERO
Rot W&R
Spuhn I.
Spuhn Pt
FRITZ COVE
Gibby Rk
George Rk
Dornin Rk
Shaman I
BROWN BLUFF
LANDSLIDE
Fl G 4sec 21ft
Fl 6sec 17ft

ACOUSTICAL SURVEY FORM

AREA Fritz Cove Run# 3

Date 1-11-77 Vessel SEARCHER

Operators Krieger Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0036

1/ Calibration tone side #1 - Tape index 0036 → 0077 Gain 3.5

0917 → 0934 3.5

→

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0077 @ Gain 3.5

Log time of survey: Start 1418 End 1533 Total 75 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage at start

Calibration osc setting Transmit pulse 260 VPP white
250 VPP black
at end

Tape reversed @ 0919 on tape index

Taping of run ended @ 0111 on tape index

Calibration tone side #2 - Tape index 0919 → 0904 @ Gain 3.5

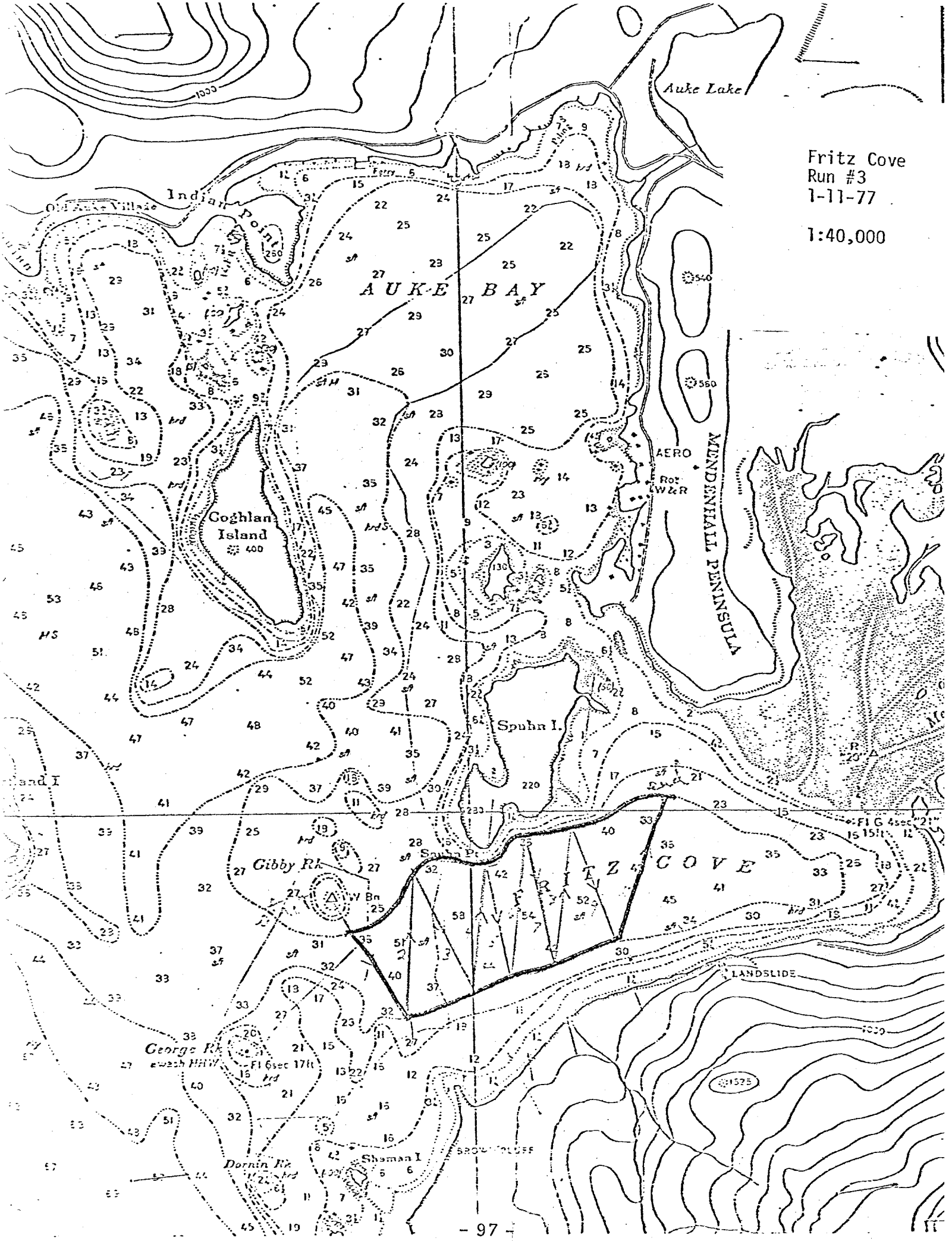
0111 → 0077 3.5

→

→

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Auke Lake
Fritz Cove
Run #3
1-11-77
1:40,000
Old Auke Village
Indian Point
AUKE BAY
Coghlan Island
AERO
MENDENHALL PENINSULA
Spuhn I.
Gibby Rk
FRITZ COVE
LANDSLIDE
George Rk
Dornin Rk
Shaman I

ACOUSTICAL SURVEY FORM

AREA Fritz Cove Run# 1

Date 1-18-77 Vessel JOHN COBB - NMFS

Operators Krieger Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0037

1/ Calibration tone side #1 - Tape index 0037 → 0078 Gain 3.50

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0084 @ Gain 3.50

Log time of survey: Start 1436 End 1542 Total 66 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

240 VPP White Grd (at begin

Calibration osc setting 500mv Transmit pulse 230 Black Grd and e

Tape reversed @ 1018 on tape index

Taping of run ended @ 0680 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

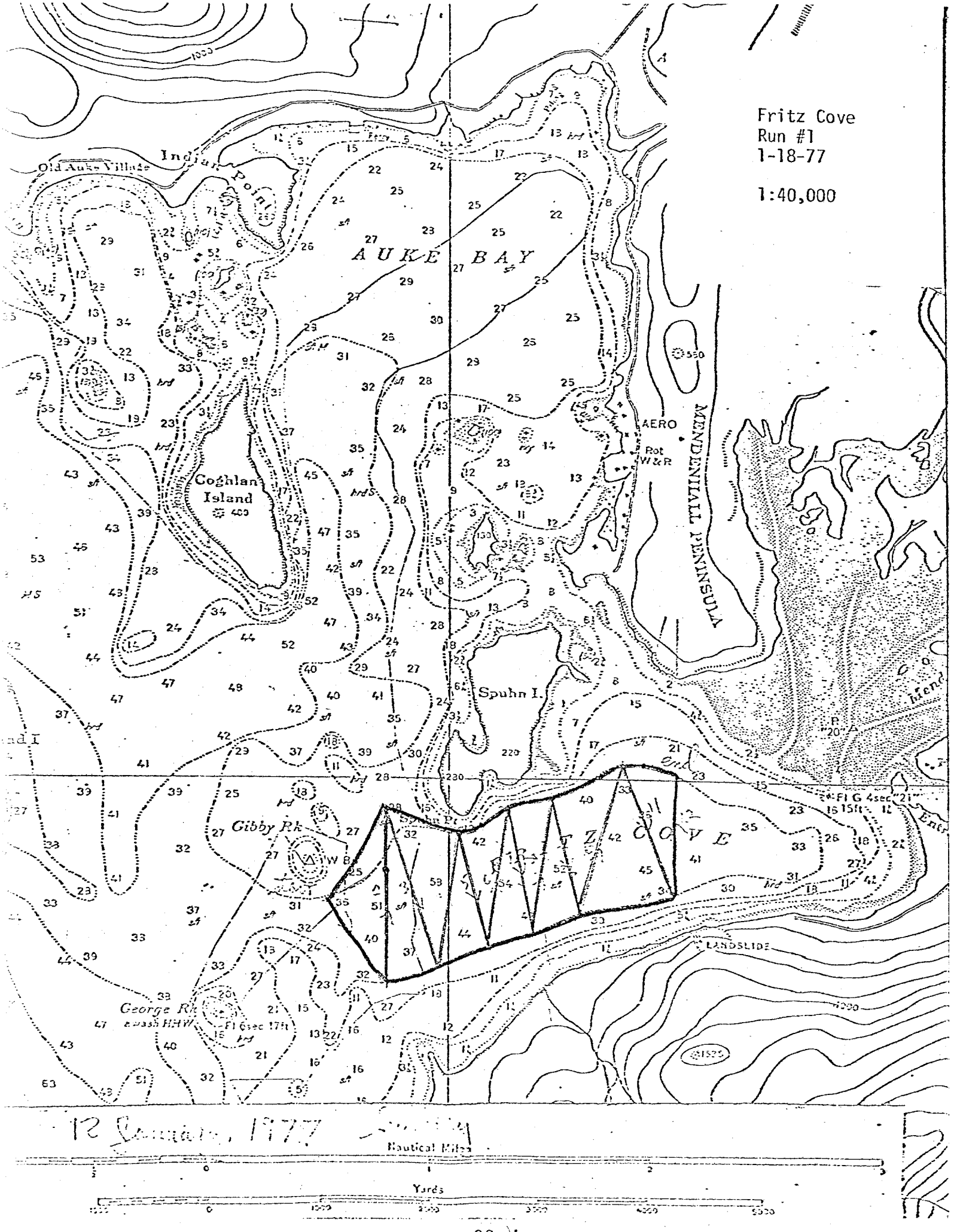
_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Fritz Cove
Run #1
1-18-77
1:40,000
AUKE BAY
Old Auke Village
Indian Point
Coghlan Island
Spuhn I.
MENDENHALL PENINSULA
AERO
Rot W&R
Gibby Rk
George Rk
FRITZ COVE
LANDSLIDE
12 January, 1977
Nautical Miles
Yards

ACOUSTICAL SURVEY FORM

AREA Favorite Bay Run# 1

Date 1-30-77 Vessel KITTIWAKE

Operators Ingledue Tide Stage Ebbing

GENERAL INFORMATION: Tape index 0001 → 0031

1/ Calibration tone side #1 - Tape index 0031 → 0085 Gain 3.0

____ → ____ ____

____ → ____ ____

____ → ____ ____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0085 @ Gain 3.0

Log time of survey: Start 4:22 End 4:32 Total 9 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage ____

Calibration osc setting 500 mv Transmit pulse ____

Tape reversed @ - on tape index

Taping of run ended @ 0418 on tape index

Calibration tone side #2 - Tape index 0418 → 0450 @ Gain 3.0

____ → ____ ____

____ → ____ ____

____ → ____ ____

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

ACOUSTICAL SURVEY FORM

AREA Favorite Bay Run# 2

Date 1-30-77 Vessel KITTIWAKE

Operators Ingledue Tide Stage ebbing

GENERAL INFORMATION: Tape index 0450 → 0463

1/ Calibration tone side #1 - Tape index 0480 → 0522 Gain 2.45

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0522 @ Gain 2.45

Log time of survey: Start 4:37 End 4:47 Total 10 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage _____

Calibration osc setting 500 mv Transmit pulse _____

Tape reversed @ 0772 on tape index

Taping of run ended @ 0752 on tape index

Calibration tone side #2 - Tape index 0752 → 0772 @ Gain 2.45

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

463-480 had Ross in stand-by while calibrating, so did calibration from 480-522 and then started run.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

ACOUSTICAL SURVEY FORM

AREA Favorite Bay Run# 3

Date 1-30-77 Vessel KITTIWAKE

Operators Ingledue Tide Stage ebb

GENERAL INFORMATION: Tape index 0772 → 0760

1/ Calibration tone side #1 - Tape index 0760 → 0736 Gain 2.40

____ → ____ ____

____ → ____ ____

____ → ____ ____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0736 @ Gain 2.40

Log time of survey: Start 5:05 End 5:27 Total 22 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage ____

Calibration osc setting 500 mv Transmit pulse ____

Tape reversed @ -- on tape index

Taping of run ended @ 0066 on tape index

Calibration tone side #2 - Tape index 0066 → 0012 @ Gain 2.40

____ → ____ ____

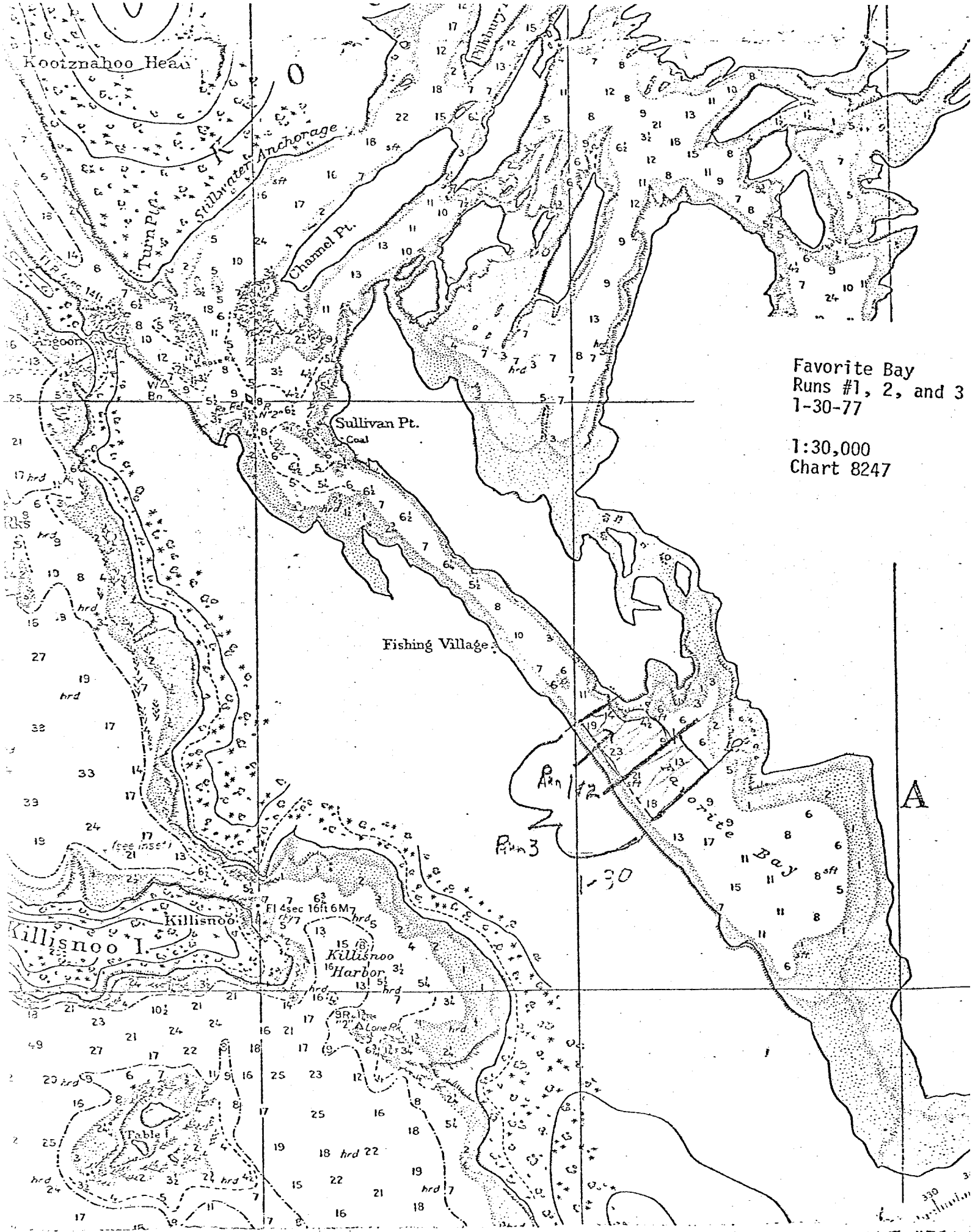
____ → ____ ____

____ → ____ ____

COMMENTS:

Herring moving out of deep to edges of bay. Herring seen flipping on surface.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



1 & 2 = .25 = 167,475 m³

3 = .45 = 301,456 m³

ACOUSTICAL SURVEY FORM

AREA Hood Bay (South Arm) Run# 1

Date 1-20-77 Vessel NMFS JOHN COBB

Operators Krieger, Staska Tide Stage ebbing

GENERAL INFORMATION: Tape index 0000 → 0033

1/ Calibration tone side #1 - Tape index 0033 → 0078 Gain 6.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0080 @ Gain 6.0

Log time of survey: Start 1850 End 1934 Total 44 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse 230 VPP Black / 240 VPP White

Tape reversed @ -- on tape index

Taping of run ended @ 1020 on tape index

Calibration tone side #2 - Tape index 1020 → 1036 @ Gain 6.0

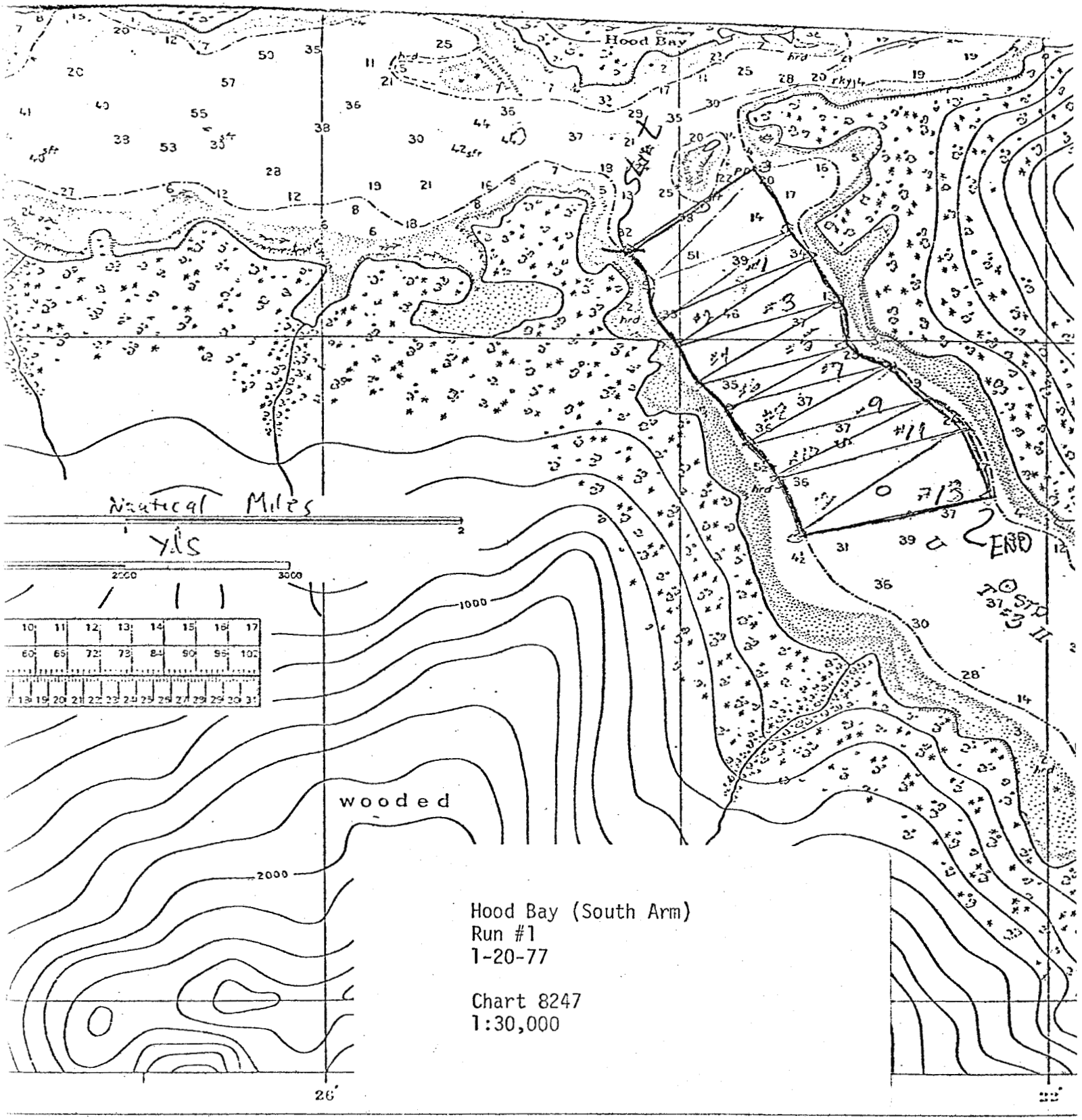
_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Hood Bay (South Arm)
Run #1
1-20-77

Chart 8247
1:30,000

ACOUSTICAL SURVEY FORM

AREA Hood Bay Run# 1

Date 1-28-77 Vessel KITTIWAKE

Operators Ingledue Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0022

1/ Calibration tone side #1 - Tape index 0022 → 0076 Gain 4.3

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index _____ @ Gain _____

Log time of survey: Start 1650 End 1710 Total 20 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 2 Input voltage _____

Calibration osc setting 500 mv Transmit pulse _____

Tape reversed @ -- on tape index

Taping of run ended @ -- on tape index

Calibration tone side #2 - Tape index 0691 → 0716 @ Gain 4.3

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

ACOUSTICAL SURVEY FORM

AREA Hood Bay Run# 2

Date 1-28-77 Vessel KITTIWAKE

Operators Ingledue Tide Stage

GENERAL INFORMATION: Tape index →

1/ Calibration tone side #1 - Tape index 0719 → 0743 Gain 4.0

0925 → 0953 4.0

→

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index @ Gain

Log time of survey: Start 1716 End 1739 Total 23 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ 0953 & 0923 / 0900 & 0698 on tape index

Taping of run ended @ 900, 698, 680 on tape index

Calibration tone side #2 - Tape index 698 → @ Gain 4.0

→

→

→

COMMENTS:

Extra calibration put in by error after reversing the tape in this run.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

ACOUSTICAL SURVEY FORM

AREA Hood Bay Run# 3

Date 1-28-77 Vessel KITTIWAKE

Operators Ingledue Tide Stage _____

GENERAL INFORMATION: Tape index 0650 (after calibration) → 0645

1/ Calibration tone side #1 - Tape index 0670 → 0650 Gain 3.3

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0645 @ Gain 3.3

Log time of survey: Start 1745 End 1803 Total 18 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage _____

Calibration osc setting 500 mv Transmit pulse _____

Tape reversed @ -- on tape index

Taping of run ended @ 0100 on tape index

Calibration tone side #2 - Tape index 0100 → 0050 @ Gain 3.3

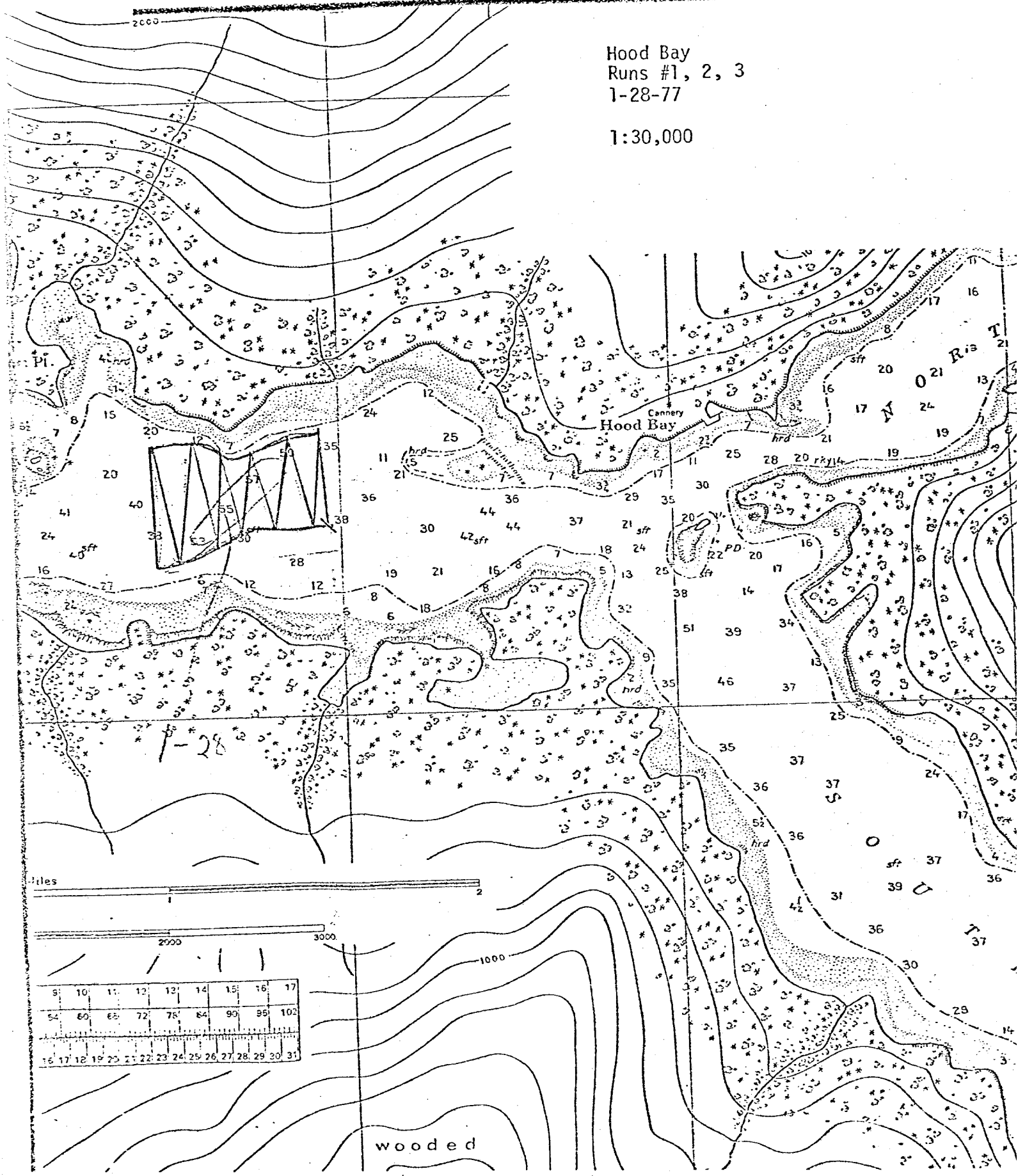
_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Hood Bay
Runs #1, 2, 3
1-28-77
1:30,000
Cannery
Hood Bay
wooded
1-28

ACOUSTICAL SURVEY FORM

AREA Lisianski Inlet Run# 1

Date 11-21-76 Vessel KITTIWAKE

Operators Copeland Tide Stage Flood

GENERAL INFORMATION: Tape index 0000 → 0040

1/ Calibration tone side #1 - Tape index 0040 → 0080 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0080 @ Gain 5.0

Log time of survey: Start 1310 End 1445 Total 95 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse _____

Tape reversed @ 1071 on tape index

Taping of run ended @ 0100 on tape index

Calibration tone side #2 - Tape index 1040 → 1025 @ Gain 5.0

1080 → 1040 5.0

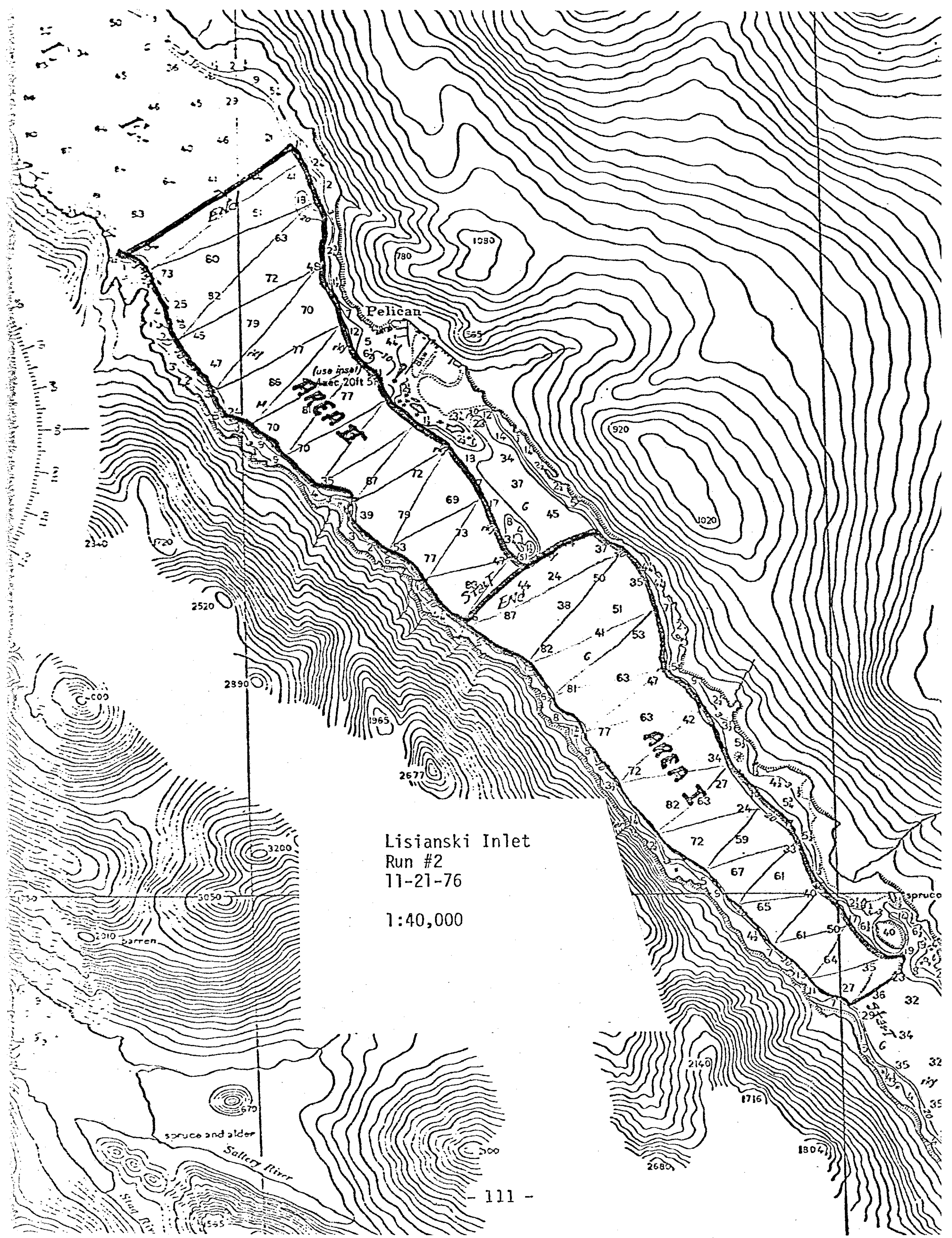
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Transducer was towed body - calibration would be for the towed body.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Pelican
Lisianski Inlet
Run #2
11-21-76
1:40,000
spruce and alder
barren
spruce
Saltery River

ACOUSTICAL SURVEY FORM

AREA Lisianski Inlet (area #2) Run# 2

Date 11-21-76 Vessel KITTIWAKE

Operators Copeland Tide Stage flooding

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0066 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0066 @ Gain 5.0

Log time of survey: Start 1525 End 1650 Total 85 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse _____

Tape reversed @ 1000 on tape index

Taping of run ended @ 0088 on tape index

Calibration tone side #2 - Tape index 0088 → 0040 @ Gain 5.0

_____ → _____ _____

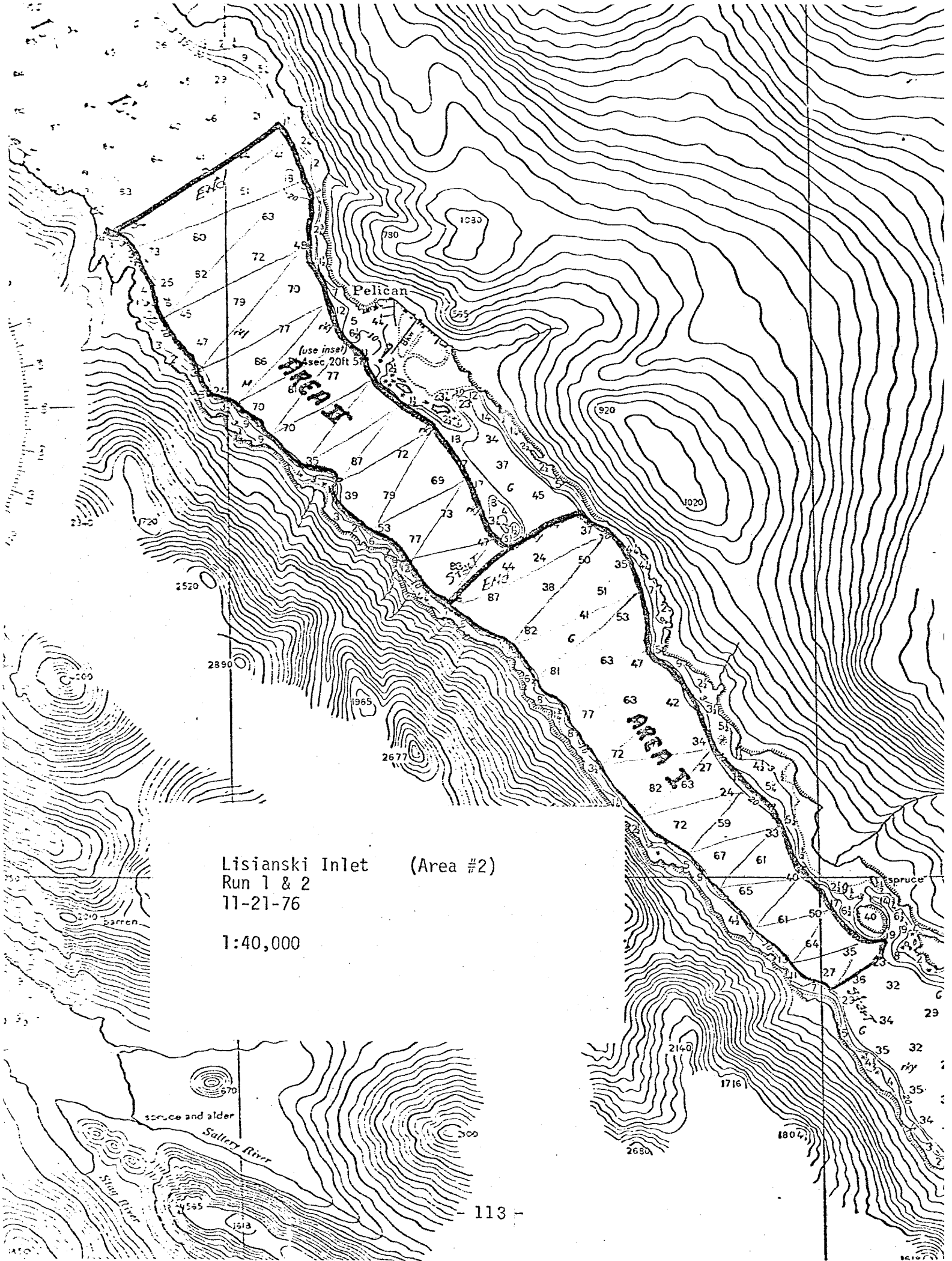
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Visual estimate 2-3 10^6 pounds. Transducer used towed body - calibration would be for the towed body owned by Art Schmidt, Sport Fish, Sitka.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Lisianski Inlet (Area #2)
Run 1 & 2
11-21-76

1:40,000

ACOUSTICAL SURVEY FORM

AREA Lisianski Straits Run# 1

Date 12-10-76 Vessel AUKLET

Operators Copeland Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0040

1/ Calibration tone side #1 - Tape index 0040 → 0117 Gain 6.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0117 @ Gain 6.0

Log time of survey: Start 1800 End 1830 Total 30 min.

Attenuated @ -12 db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse _____

Tape reversed @ _____ on tape index

Taping of run ended @ _____ on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

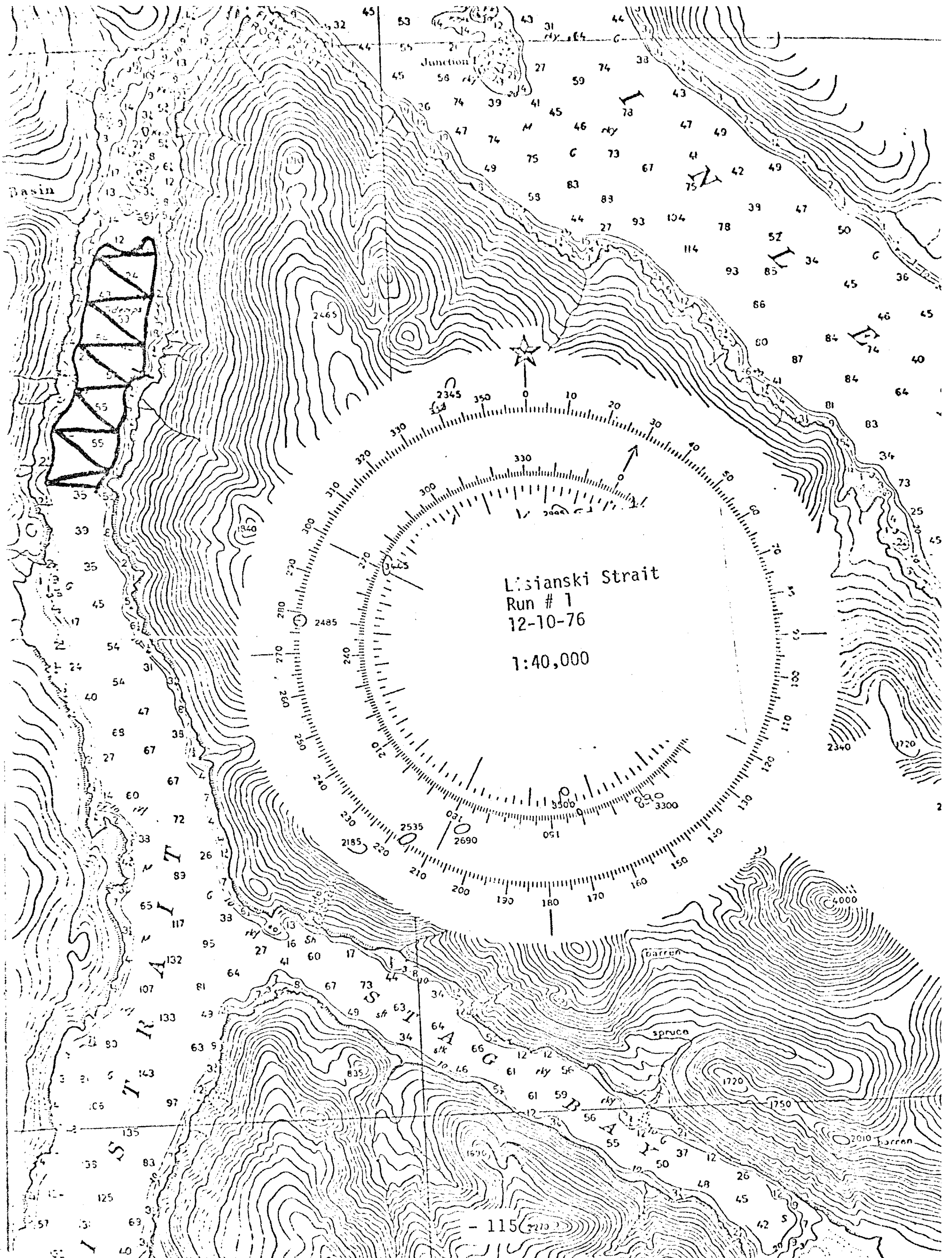
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Tide was ebbing, part of herring moved outside of survey area.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


L'sianski Strait
Run # 1
12-10-76
1:40,000
Junction I
Basin
barren
spruce

ACOUSTICAL SURVEY FORM

AREA Lisianski Straits Run# 1

Date 1-27-77 Vessel SUNDANCE

Operators Copeland Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0023

1/ Calibration tone side #1 - Tape index 0023 → 0061 Gain 4.0

→ Gain

→ Gain

→ Gain

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0061 @ Gain 4.0

Log time of survey: Start 1636 End 1720 Total 44 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 110 VAC

Calibration osc setting 500 mv Transmit pulse

Tape reversed @ 1000 on tape index

Taping of run ended @ 0974 on tape index

Calibration tone side #2 - Tape index 0974 → 0957 @ Gain 4.0

→ Gain

→ Gain

→ Gain

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

ACOUSTICAL SURVEY FORM

AREA Lisianski Straits Run # 2

Date 1-27-77 Vessel SUNDANCE

Operators Copeland Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0020

1/ Calibration tone side #1 - Tape index 0020 → 0061 Gain 4.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0060 @ Gain 4.0

Log time of survey: Start 1735 End 1802 Total 27 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse _____

Tape reversed @ - on tape index

Taping of run ended @ 0743 on tape index

Calibration tone side #2 - Tape index 0743 → 0761 @ Gain 4.0

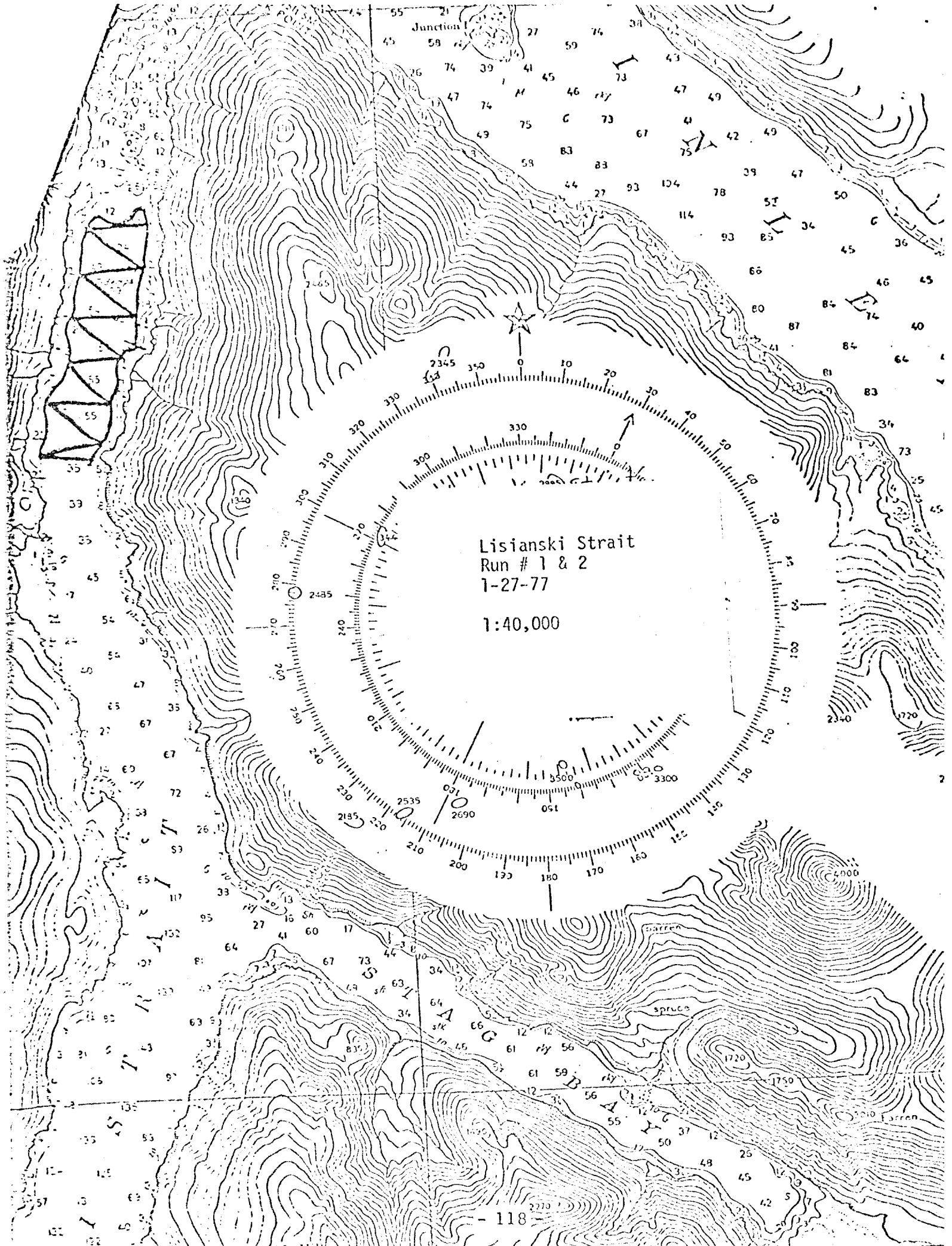
_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Lisianski Strait
Run # 1 & 2
1-27-77
1:40,000

ACOUSTICAL SURVEY FORM

AREA Seymour Canal (#15 Rock area) Run# 1

Date 4-28-77 Vessel AUKLET

Operators Blankenbeckler Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0067 Gain 4.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0067 @ Gain 4.0

Log time of survey: Start _____ End _____ Total 24 min. 15 se

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 2 Input voltage 115 VAC

Calibration osc. setting 500 mv Transmit pulse 190 VPP Blk & Shi

Tape reversed @ _____ on tape index

Taping of run ended @ 0673 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

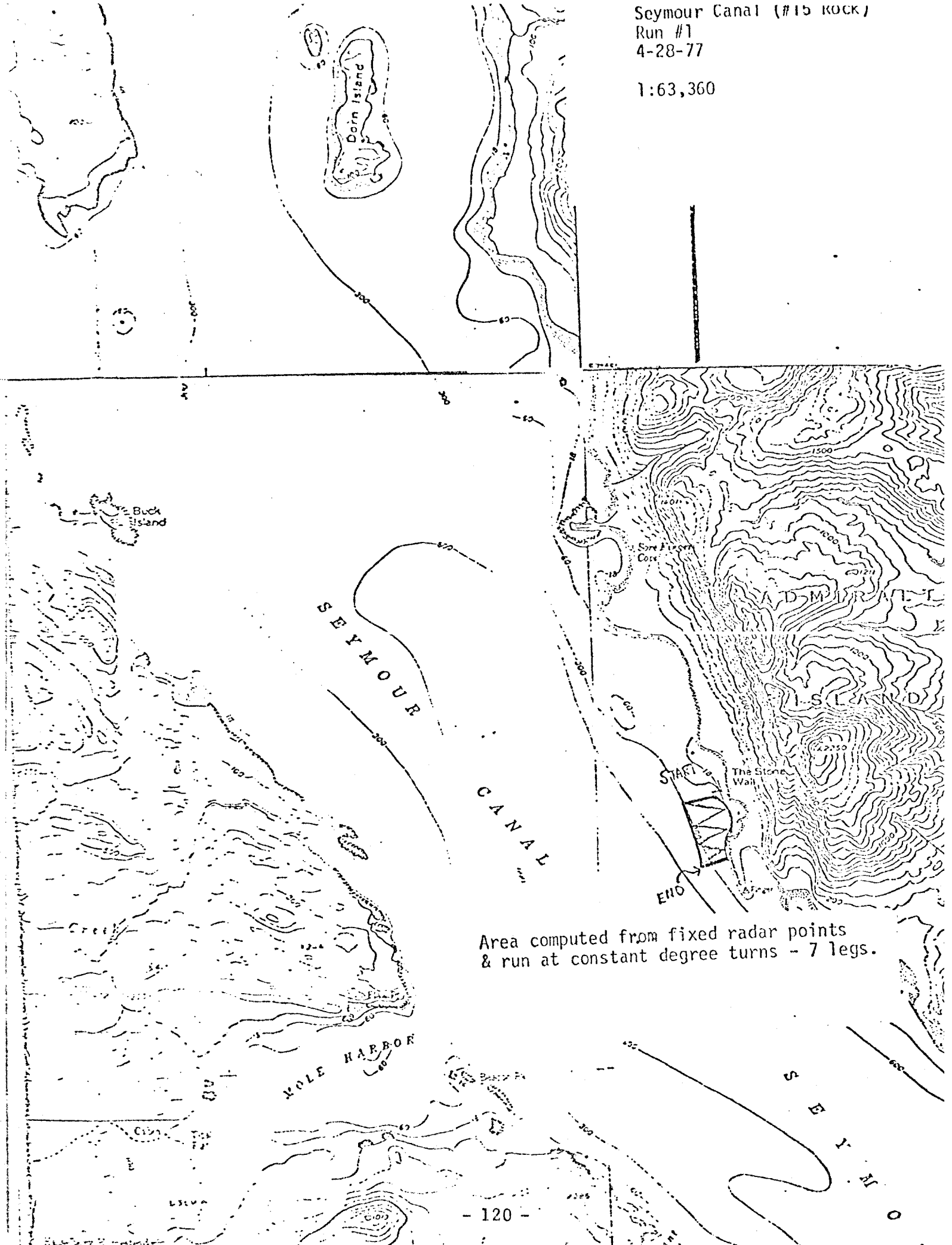
_____ → _____ _____

_____ → _____ _____

COMMENTS:

This was a subsample or a portion of the total where fish observed. Transects tight fish did not seem to be moving fast from area. No saturation observed on osc. from fish signals. Whales and sea lions in area. Note that transmit pulse 190 VPP Blk & Shield which is down from normal 205 to 210 VPP.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Area computed from fixed radar points & run at constant degree turns - 7 legs.

ACOUSTICAL SURVEY FORM

AREA Seymour Canal (#15 Rock area) Run # 2

Date 4-28-77 Vessel AUKLET

Operators Blankenbeckler, Bergmann Tide Stage _____

GENERAL INFORMATION: Tape index 0700 → 0705

1/ Calibration tone side #1 - Tape index 0673 → 0700 Gain 4.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0705 @ Gain 4.0

Log time of survey: Start _____ End _____ Total 22 min. 10 s

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 2 Input voltage 115 VAC

Calibration oc. setting 500 mv Transmit pulse 190 VPP Blk & Shi

Tape reversed @ 1035 on tape index

Taping of run ended @ 1002 on tape index

Calibration tone side #2 - Tape index 1002 → 0986 @ Gain 4.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

This was a duplicate run of #1. Herring had moved partially from area and expect biomass somewhat less. No saturation observed.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Area computed from fixed radar points & run at constant degree turns - 7 legs.

ACOUSTICAL SURVEY FORM

AREA Seymour Canal (#29 Rock) Run # 3

Date 4-28-77 Vessel AUKLET

Operators Blankenbeckler, Bergmann Tide Stage _____

GENERAL INFORMATION: Tape index 0985 → 0980

1/ Calibration tone side #1 - Tape index 1002 → 0986 Gain 4.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0980 @ Gain 4.0

Log time of survey: Start _____ End _____ Total 43:55 min

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 2 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse 190 VPP Blk & Sh

Tape reversed @ _____ on tape index

Taping of run ended @ 0010 on tape index

Calibration tone side #2 - Tape index _____ → _____ @ Gain _____

_____ → _____ _____

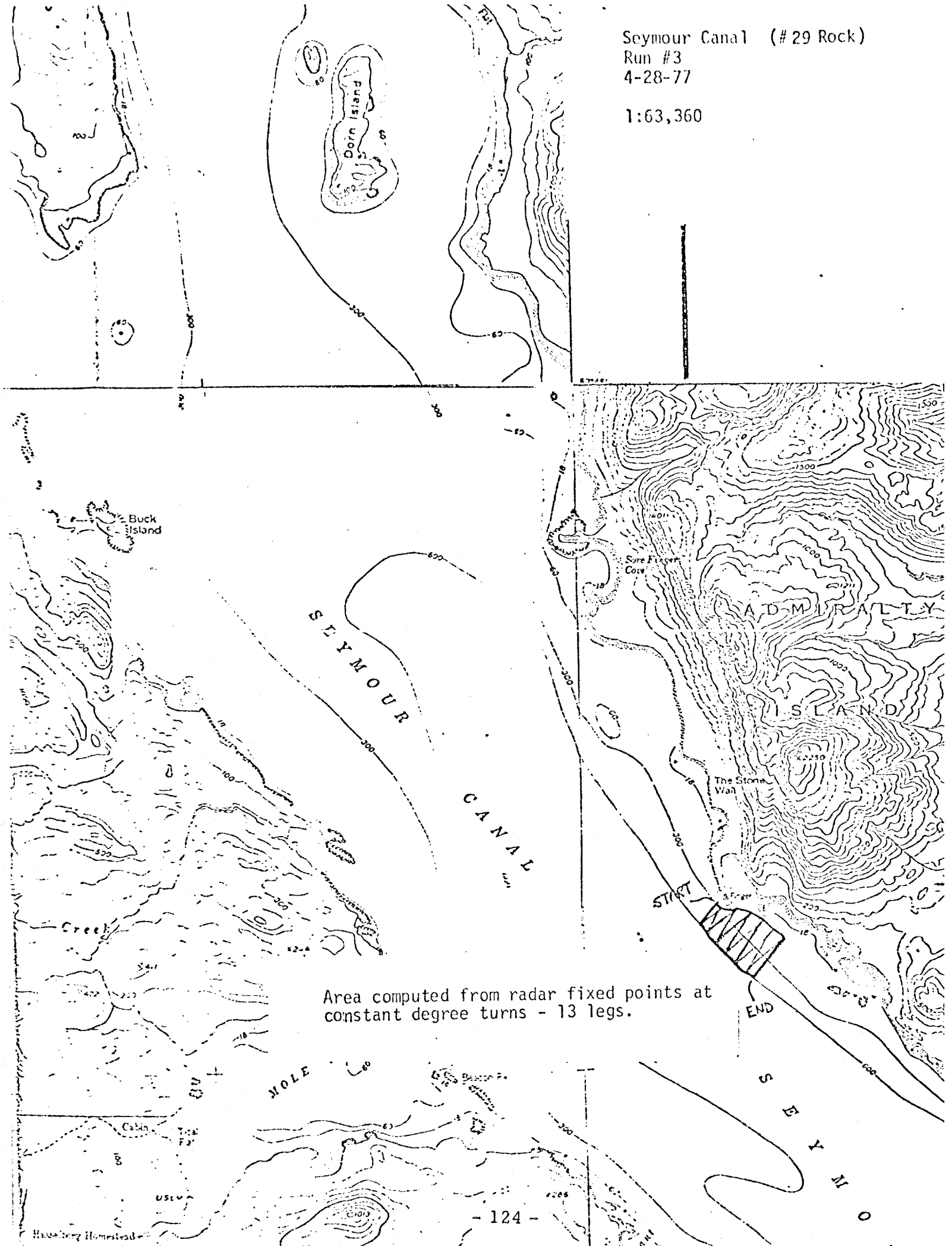
_____ → _____ _____

_____ → _____ _____

COMMENTS:

This run was in another area of Seymour. No saturation observed.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Seymour Canal (#29 Rock)
Run #3
4-28-77
1:63,360
Dorn Island
Buck Island
SEYMOUR CANAL
ADMIRALTY
ISLAND
The Stone Wall
START
END
Area computed from radar fixed points at constant degree turns - 13 legs.

ACOUSTICAL SURVEY FORM

AREA Seymour Canal (Windfall Harbor) Run# 1

Date 4-29-77 Vessel AUKLET

Operators Blankenbeckler, Bergmann Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0020

1/ Calibration tone side #1 - Tape index 0020 → 0059 Gain 4.5

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0059 @ Gain 4.5

Log time of survey: Start 1436 End 1547 Total 71 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 2 Input voltage 115 VAC

Calibration oc. setting 500 mv Transmit pulse 190 VPP Blk & Shie

Tape reversed @ 1035 on tape index

Taping of run ended @ 0618 on tape index

Calibration tone side #2 - Tape index 0616 → 0596 @ Gain 4.5

_____ → _____ _____

_____ → _____ _____

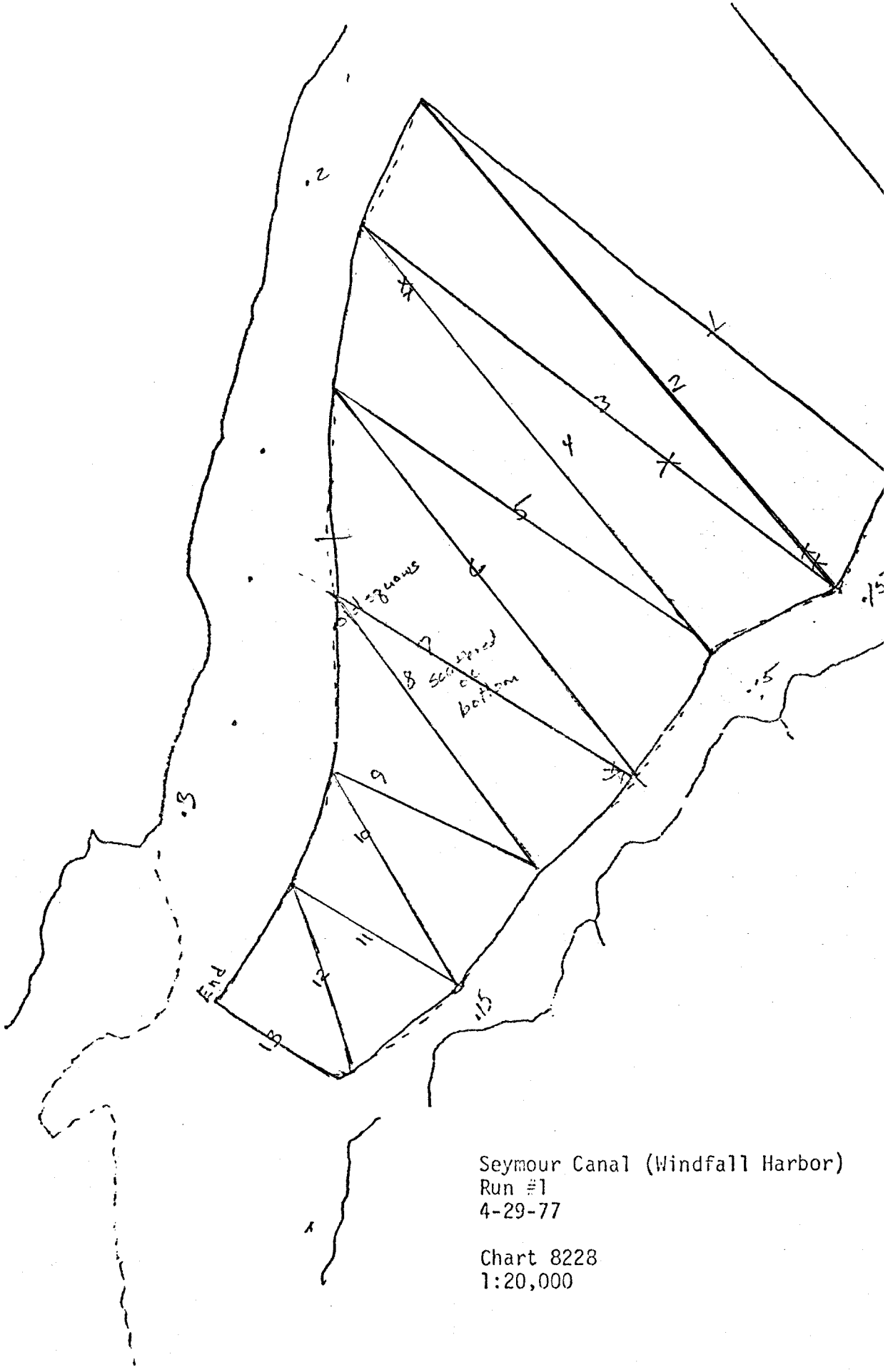
_____ → _____ _____

COMMENTS:

Some of the fish near bottom with no saturation observed. Suspect these are immature and possibly mixed with other species. A test set will be made to identify as to immatures. Immatures were documented in this area in 1976 near the same date by a test set from Cape Falcon. Heavey concentration of Old Squaws in the area.

Test set results????

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Seymour Canal (Windfall Harbor)
Run #1
4-29-77

Chart 8228
1:20,000

ACOUSTICAL SURVEY FORM

AREA Seymour Canal (Sore Finger) Run# 1

Date 4-30-77 Vessel AUKLET

Operators Blankenbeckler, Bergmann Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0067 Gain 4.5

→ Gain

→ Gain

→ Gain

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0067 @ Gain 4.5

Log time of survey: Start 1332 End 1445 Total 73 min.

Attenuated @ -12db Pulse length Tape speed 7.5

Paper speed 2 Input voltage 115 VAC

Calibration oc. setting 500 mv Transmit pulse 190 VPP Blk & Shi

Tape reversed @ 1040 on tape index

Taping of run ended @ 0574 on tape index

Calibration tone side #2 - Tape index 0113 → 0075 @ Gain 4.5

→ Gain

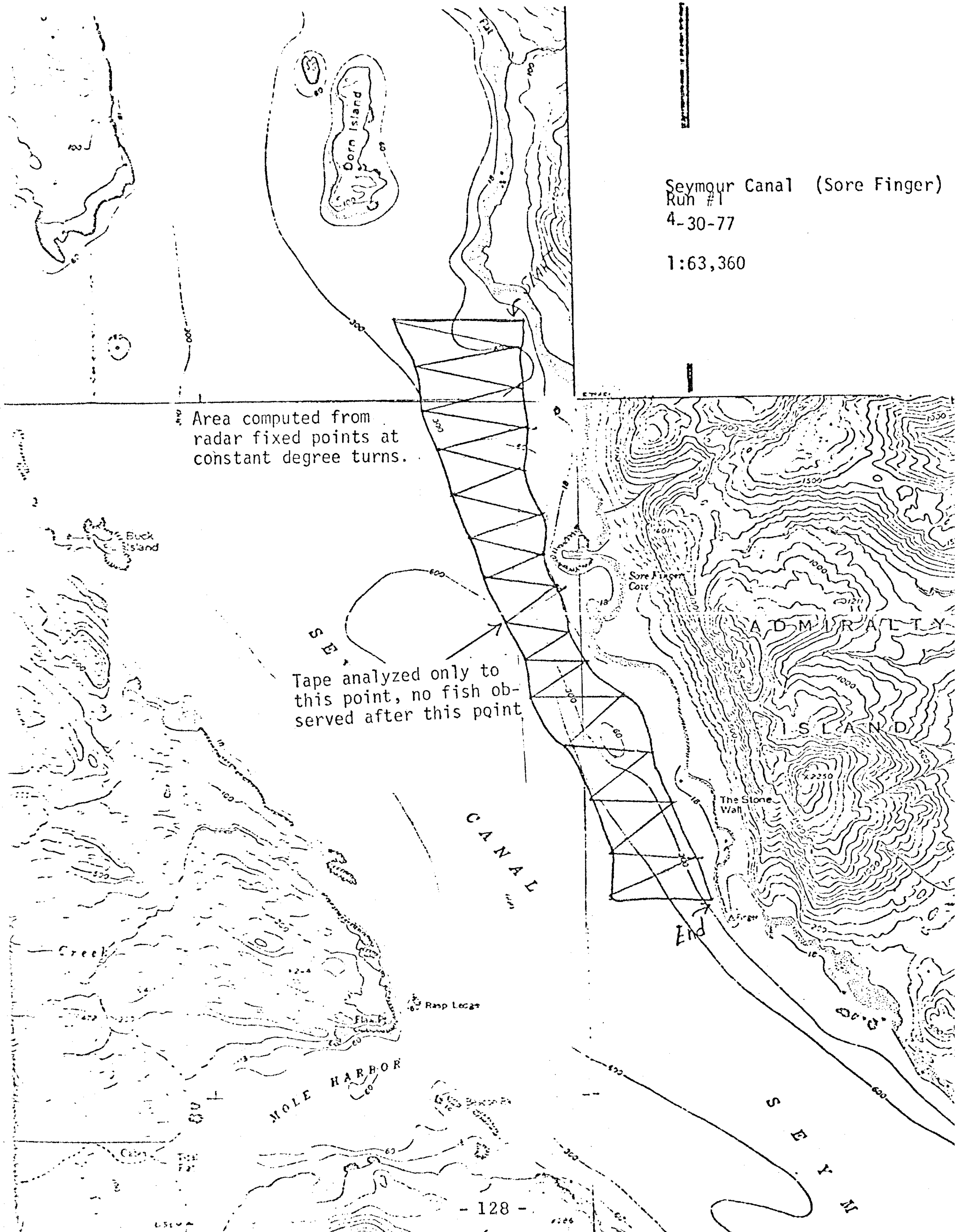
→ Gain

→ Gain

COMMENTS:

Analyze on computer only to 0574 side 2 of reel #1. No fish targets were sampled after this point. A few spikes saturated in the 1st two schools hit. Sixteen schools observed on Wesmar, Humpback whales in area, also sea lions. One large piling type school observed out of survey area.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Seymour Canal (Sore Finger)
Run #1
4-30-77
1:63,360
Area computed from radar fixed points at constant degree turns.
Tape analyzed only to this point, no fish observed after this point
End
Dorn Island
Buck Island
Sore Finger Cove
ADMIRALTY
ISLAND
The Stone Wall
SEYMOUR CANAL
Rasp Ledge
MOLE HARBOR
Creek

ACOUSTICAL SURVEY FORM

AREA Seymour Canal (Sore Finger) Run # 2

Date 4-30-77 Vessel AUKLET

Operators Blankenbeckler, Bergmann Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0063 Gain 4.5

→ →

→ →

→ →

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0063 @ Gain 4.5

Log time of survey: Start 1647 End 1801 Total 74 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 2 Input voltage 115 VAC

Calibration oc. setting 500 mv Transmit pulse 190 VPP Blk & Shie

Tape reversed @ 1030 on tape index

Taping of run ended @ 0530 on tape index

Calibration tone side #2 - Tape index 0530 → 0482 @ Gain 4.5

→ →

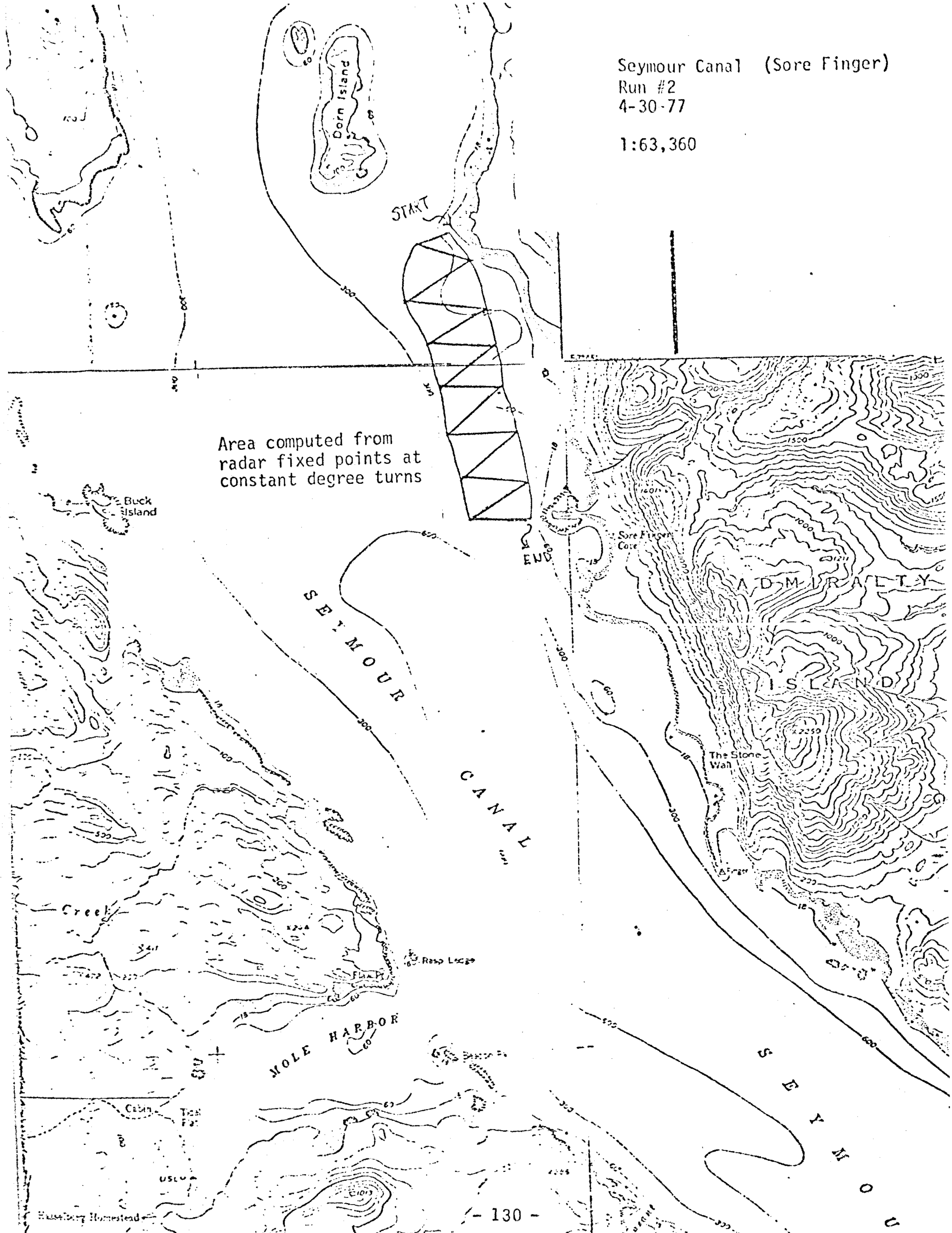
→ →

→ →

COMMENTS:

Area taped similar to run #1 on 4-30-77. Saturation noted on two schools hit. Humpback whales (3) were present in area breaking up schools from first survey. Nine total schools were observed on Wesmar for the area. Some avoidance may have occurred but not evident on Wesmar. Seven schools were located outside survey area.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Seymour Canal (Sore Finger)
Run #2
4-30-77
1:63,360
START
END
Area computed from
radar fixed points at
constant degree turns
Dorn Island
Buck Island
Sore Finger Cove
ADMIRALTY
ISLAND
The Stone Wall
SEYMOUR
CANAL
MOLE HARBOR
Creek
Rasp Ledge
Cabin
SEYMOU

ACOUSTICAL SURVEY FORM

AREA Seymour Canal (#9 Rock area) Run# 1

Date 5-1-77 Vessel AUKLET

Operators Blankenbeckler, Bergmann Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0068 Gain 4.75

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0068 @ Gain 4.75

Log time of survey: Start 1134 End 1226 Total 52 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 2 Input voltage 115 VAC

Calibration oc. setting 500 mv Transmit pulse 190 VPP Blk & Shie

Tape reversed @ 1035 on tape index

Taping of run ended @ 0919 on tape index

Calibration tone side #2 - Tape index 0919 → 0903 @ Gain 4.75

_____ → _____ _____

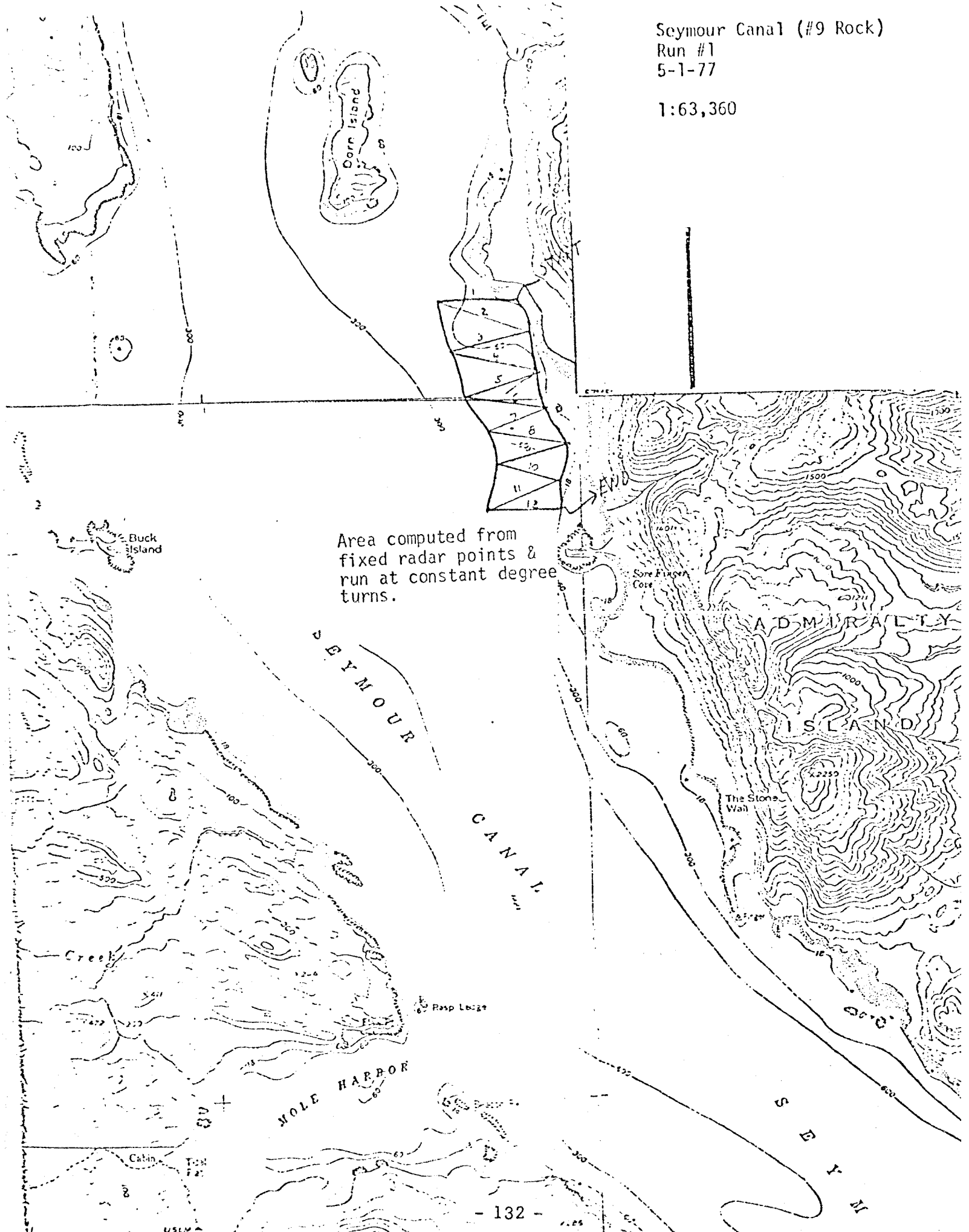
_____ → _____ _____

_____ → _____ _____

COMMENTS:

No saturation observed. Nine total schools in survey area noted by Wesmar. Of the five schools missed three were medium size schools and two were small. Transe were narrow, overlapping with Wesmar. No evidence of fish movement or avoidance of gear and vessel noted. It seems morning hours humpback whales are not breaking up schools as bad as in afternoon and evening hours. Legs were run of 235°and 60° with distance measured off shore with radar.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Seymour Canal (#9 Rock)
Run #1
5-1-77
1:63,360
Area computed from fixed radar points & run at constant degree turns.
Corn Island
Buck Island
SEYMOUR CANAL
ADMIRALTY ISLAND
The Stone Wall
Rasp Ledge
MOLE HARBOR
Creek
Cabin

ACOUSTICAL SURVEY FORM

AREA Stag Bay Run# 1

Date 11-21-76 Vessel KITTIWAKE

Operators Copeland Tide Stage flooding

GENERAL INFORMATION: Tape index 0000 → 0030

1/ Calibration tone side #1 - Tape index 0030 → 0056 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0056 @ Gain 5.0

Log time of survey: Start 1802 End 1846 Total 44 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mv Transmit pulse _____

Tape reversed @ 1000 on tape index

Taping of run ended @ 0979 on tape index

Calibration tone side #2 - Tape index 0979 → 0963 @ Gain 5.0

_____ → _____ _____

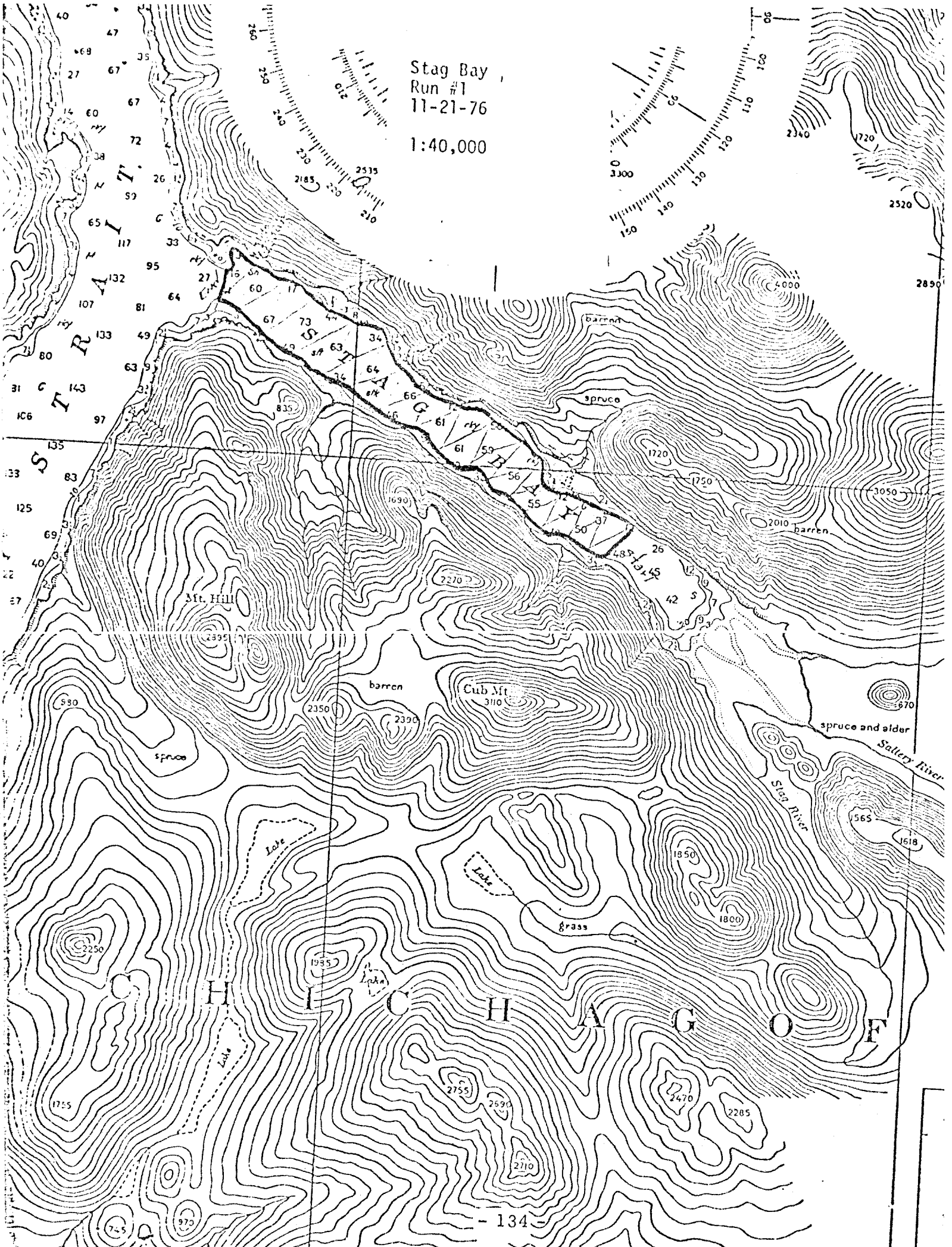
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Some saturation occurred. Analysis revealed large amount of saturation, minimum figure. Transducer used towed body - calibration would be for the towed body owned by Art Schmidt, Sport Fish, Sitka.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Stag Bay
Run #1
11-21-76
1:40,000
STAG BAY
Mt. Hill
Cub Mt
3110
barren
spruce
spruce and alder
Stag River
Sallery River
Lake
grass
CHICHAGOF
- 134 -

ACOUSTICAL SURVEY FORM

AREA Old Sitka Rocks Run# 1

Date 4-1-77 Vessel AUKLET

Operators Copeland Tide Stage ebb

GENERAL INFORMATION: Tape index 0000 → 0026

1/ Calibration tone side #1 - Tape index 0026 → 0070 Gain 6.0

____ → ____ ____

____ → ____ ____

____ → ____ ____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0070 @ Gain 6.0

Log time of survey: Start 1655 End 1820 Total 85 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration oc. setting 500 mv Transmit pulse 210 VPP Blk & Shie

Tape reversed @ 1000 on tape index

Taping of run ended @ 0095 on tape index

Calibration tone side #2 - Tape index 0095 → ____ @ Gain 6.0

____ → ____ ____

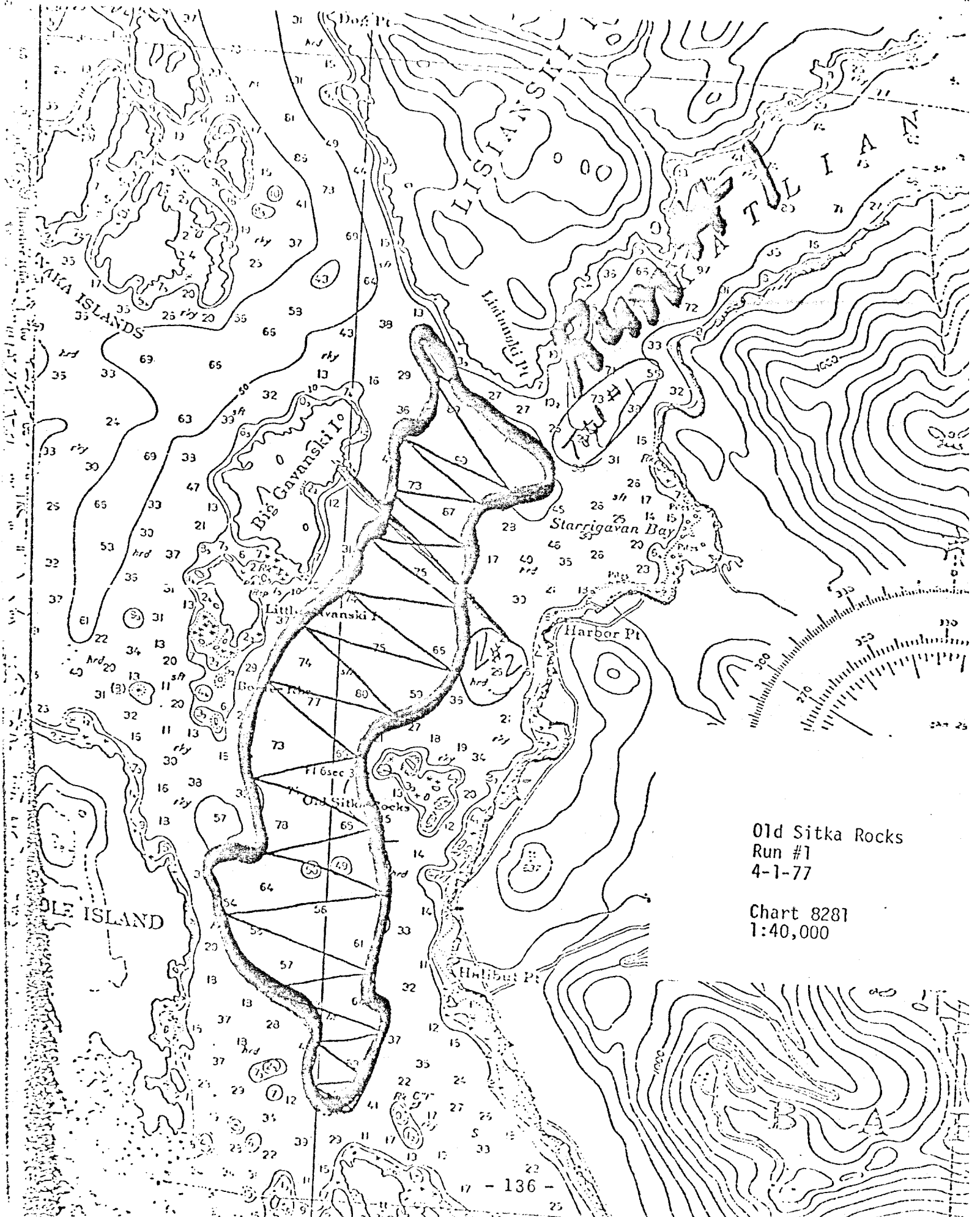
____ → ____ ____

____ → ____ ____

COMMENTS:

Thirteen schools small and scattered hit during the survey.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


Old Sitka Rocks
Run #1
4-1-77
Chart 8281
1:40,000

ACOUSTICAL SURVEY FORM

AREA Old Sitka Rocks Run# 2

Date 4-1-77 Vessel AUKLET

Operators Copeland Tide Stage _____

GENERAL INFORMATION: Tape index 0000 → 0014

1/ Calibration tone side #1 - Tape index 0014 → 0054 Gain 5.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0054 @ Gain 5.0

Log time of survey: Start 2034 End 2156 Total 82 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 V AC

Calibration oc. setting 500 mv Transmit pulse 210 VPP BTK & Shi

Tape reversed @ 1000 on tape index

Taping of run ended @ 0201 on tape index

Calibration tone side #2 - Tape index 0201 → 0168 @ Gain 5.0

_____ → _____ _____

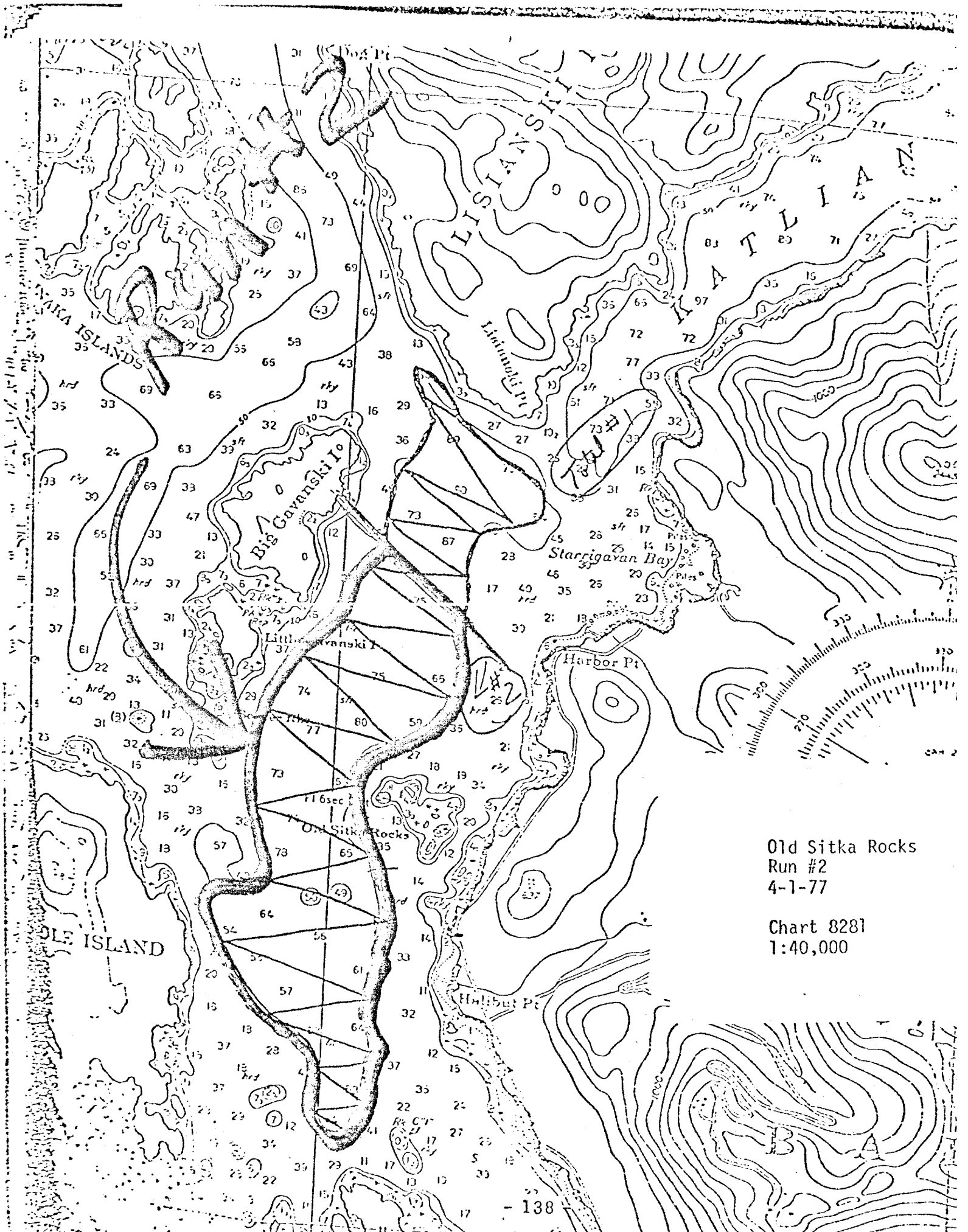
_____ → _____ _____

_____ → _____ _____

COMMENTS:

35 schools hit during survey, small shallow, scattered schools. Best survey time prior to darkness.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Old Sitka Rocks
Run #2
4-1-77

Chart 8281
1:40,000

ACOUSTICAL SURVEY FORM

AREA Sitka Rocks Run# 1

Date 4-6-77 Vessel KITTIWAKE

Operators Blankenbeckler, Bergmann Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0075 Gain 3.5

→ →

→ →

→ →

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0080 @ Gain 3.5

Log time of survey: Start 1653 End 1810 Total 77 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 V AC

Calibration oc. setting 500 mv Transmit pulse 260 VPP Blk & Shie

Tape reversed @ 1032 on tape index

Taping of run ended @ 0060 on tape index

Calibration tone side #2 - Tape index 0060 → 0000 @ Gain 3.5

→ →

→ →

→ →

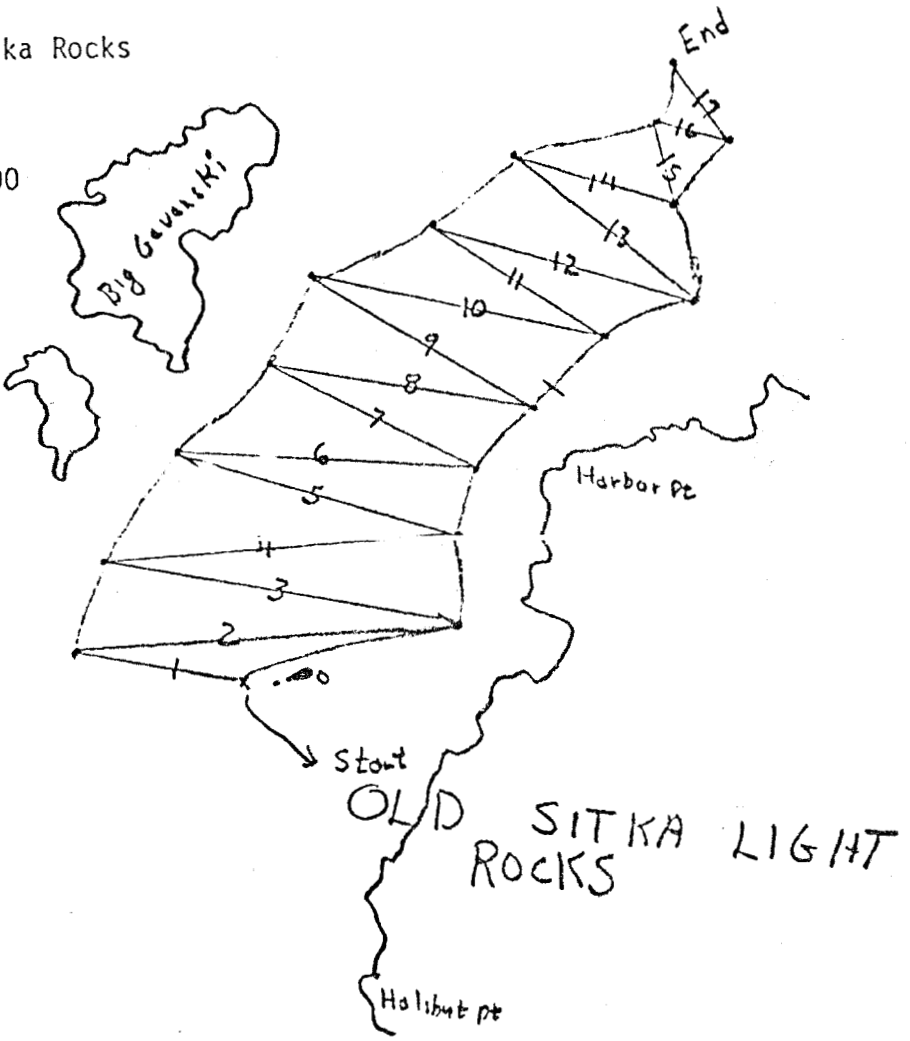
COMMENTS:

10 schools sampled during survey. Schools small, dense piling type with some saturation noted even at gain 3.5. Several large stringers of herring already moved on to the shore for spawning not included in the survey.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.

Old Sitka Rocks
Run #1
4-7-77

1:40,000



ACOUSTICAL SURVEY FORM

AREA Old Sitka Rocks Run# 1

Date 4-7-77 Vessel KITTIWAKE

Operators Blankenbeckler, Cantillon Tide Stage ebb

GENERAL INFORMATION: Tape index 0000 → 0030

1/ Calibration tone side #1 - Tape index 0030 → 0078 Gain 3.5

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0078 @ Gain 3.5

Log time of survey: Start 1948 End 2050 Total 62 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 2 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 250 VPP Blk & Shie

Tape reversed @ 1028 on tape index

Taping of run ended @ 0490 on tape index

Calibration tone side #2 - Tape index 0490 → 0457 @ Gain 3.5

_____ → _____ _____

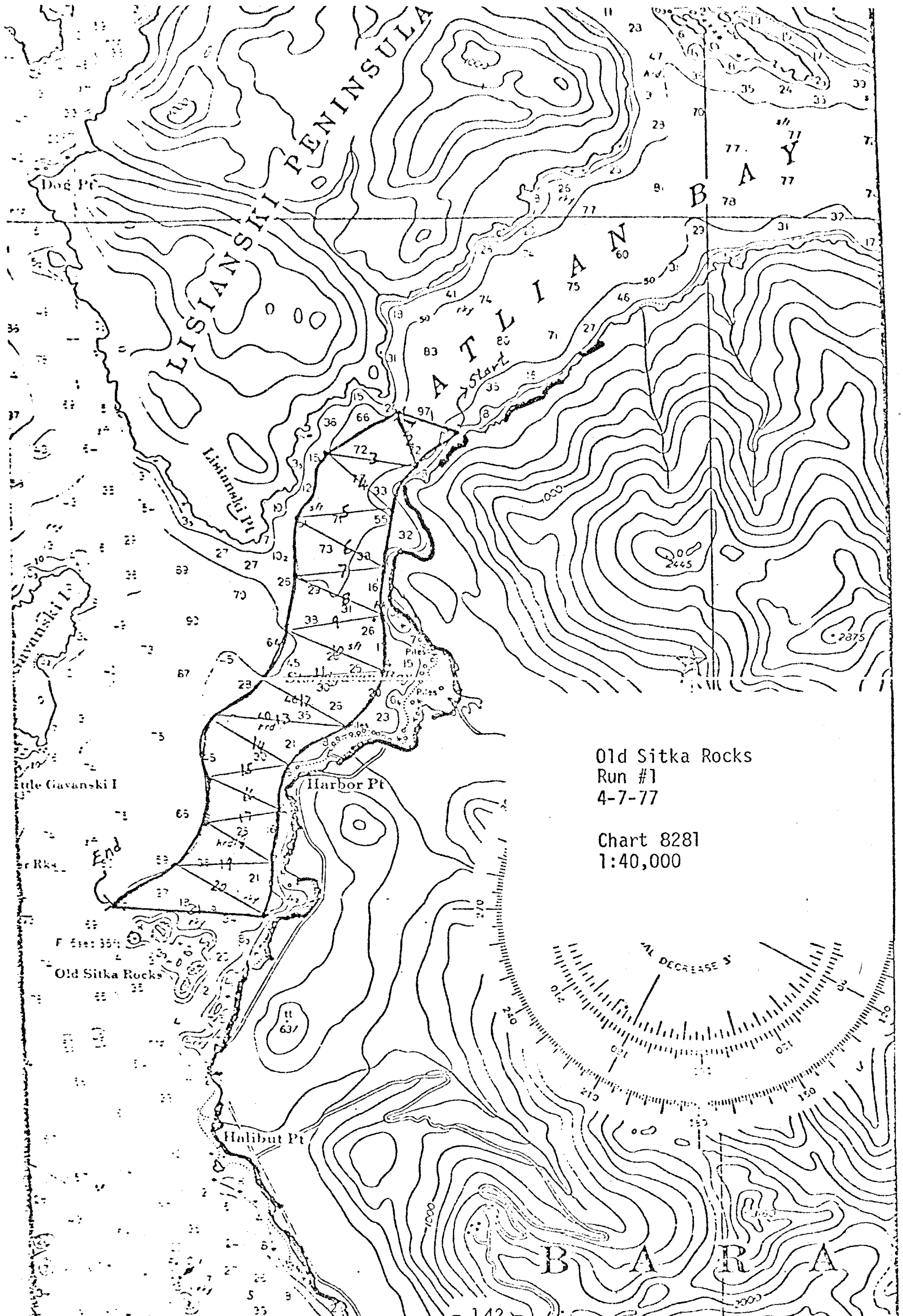
_____ → _____ _____

_____ → _____ _____

COMMENTS:

Saturation noted in last legs. Checks after survey indicated saturation even on gain #1. Schools varied considerably in density and was evident some schools were avoiding the boat. Also herring on shore not considered in survey. Comparative survey conducted with AUKLET.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Old Sitka Rocks
Run #1
4-7-77

Chart 8281
1:40,000

ACOUSTICAL SURVEY FORM

AREA Old Sitka Rocks Run# 2

Date 4-7-77 Vessel AUKLET

Operators Bergmann, Parker, Staska Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0008

1/ Calibration tone side #1 - Tape index 0009 → 0053 Gain 4.5

→

→

→

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0053 @ Gain 4.5

Log time of survey: Start 1953 End 2051:30 Total 58 min. 30sec

Attenuated @ -12db Pulse lengthlong Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500mv Transmit pulse 210 VPP R1k & Shi

Tape reversed @ 1020 on tape index

Taping of run ended @ 0743 on tape index

Calibration tone side #2 - Tape index 0737 → 0718 @ Gain 4.5

→

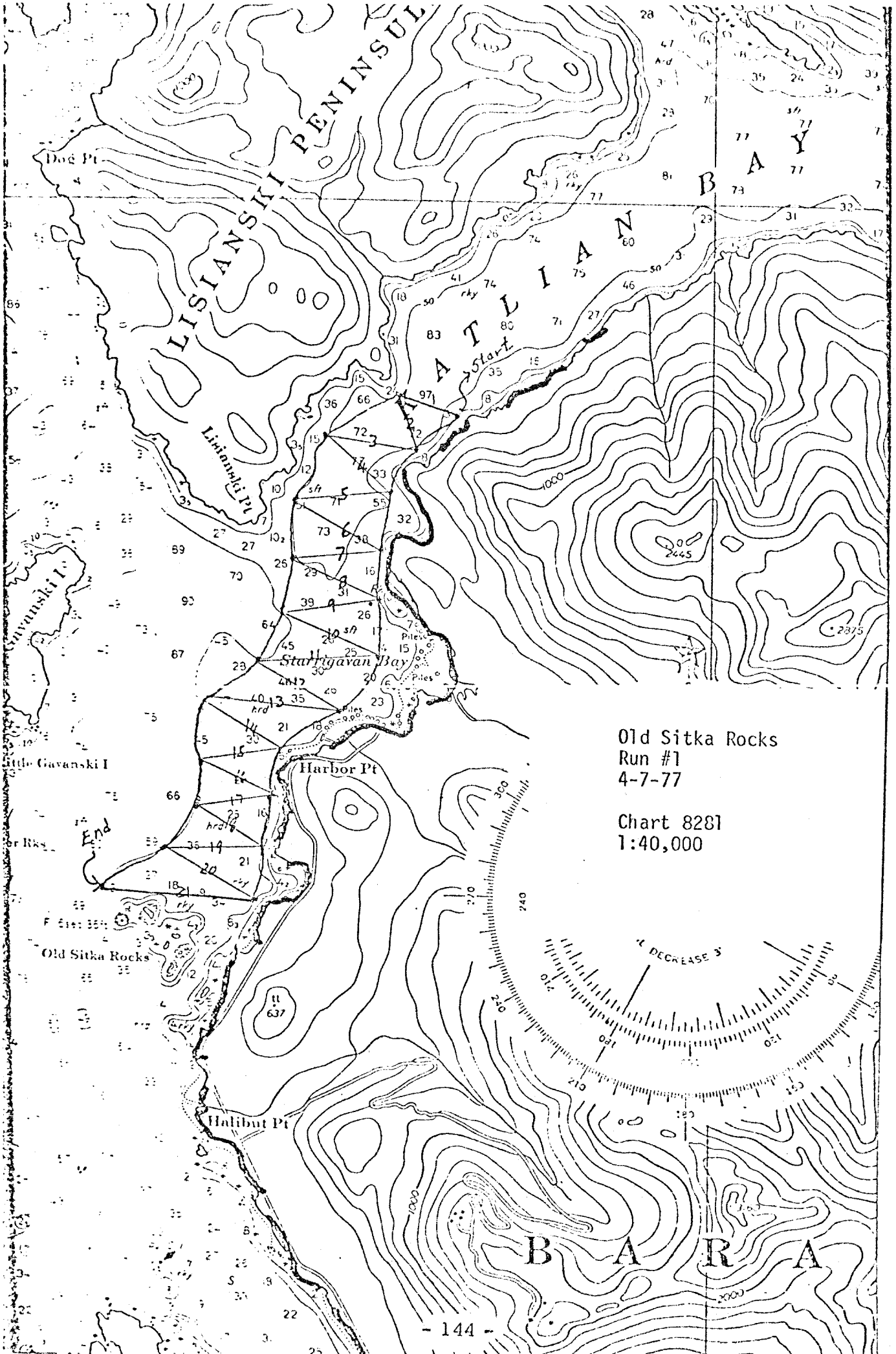
→

→

COMMENTS:

Simultaneous run with KITTIWAKE. Fourteen schools were hit by Ross documenting with total of 52 schools on Wesmar. Herring in small, scattered, shallow schools during daylight hours.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


LISIANSKI PENINSUL
Dog Pt
ATLIAN
B A Y
Start
End
Lisianski Pt
Gavanski I
Starrigavan Bay
Harbor Pt
Halibut Pt
Old Sitka Rocks
Old Sitka Rocks
Run #1
4-7-77
Chart 8281
1:40,000
B A R A

ACOUSTICAL SURVEY FORM

AREA Katlian Run # 1

Date 1-29-77 Vessel SUNDANCE

Operators Copeland Tide Stage

GENERAL INFORMATION: Tape index 0000 → 0026

1/ Calibration tone side #1 - Tape index 0026 → 0060 Gain 6.0

→ Gain

→ Gain

→ Gain

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0060 @ Gain 6.0

Log time of survey: Start 1537 End 1630 Total 53 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 115 VAC

Calibration osc setting 500 mc Transmit pulse

Tape reversed @ 1000 on tape index

Taping of run ended @ 0628 on tape index

Calibration tone side #2 - Tape index 0628 → 0680 @ Gain 6.0

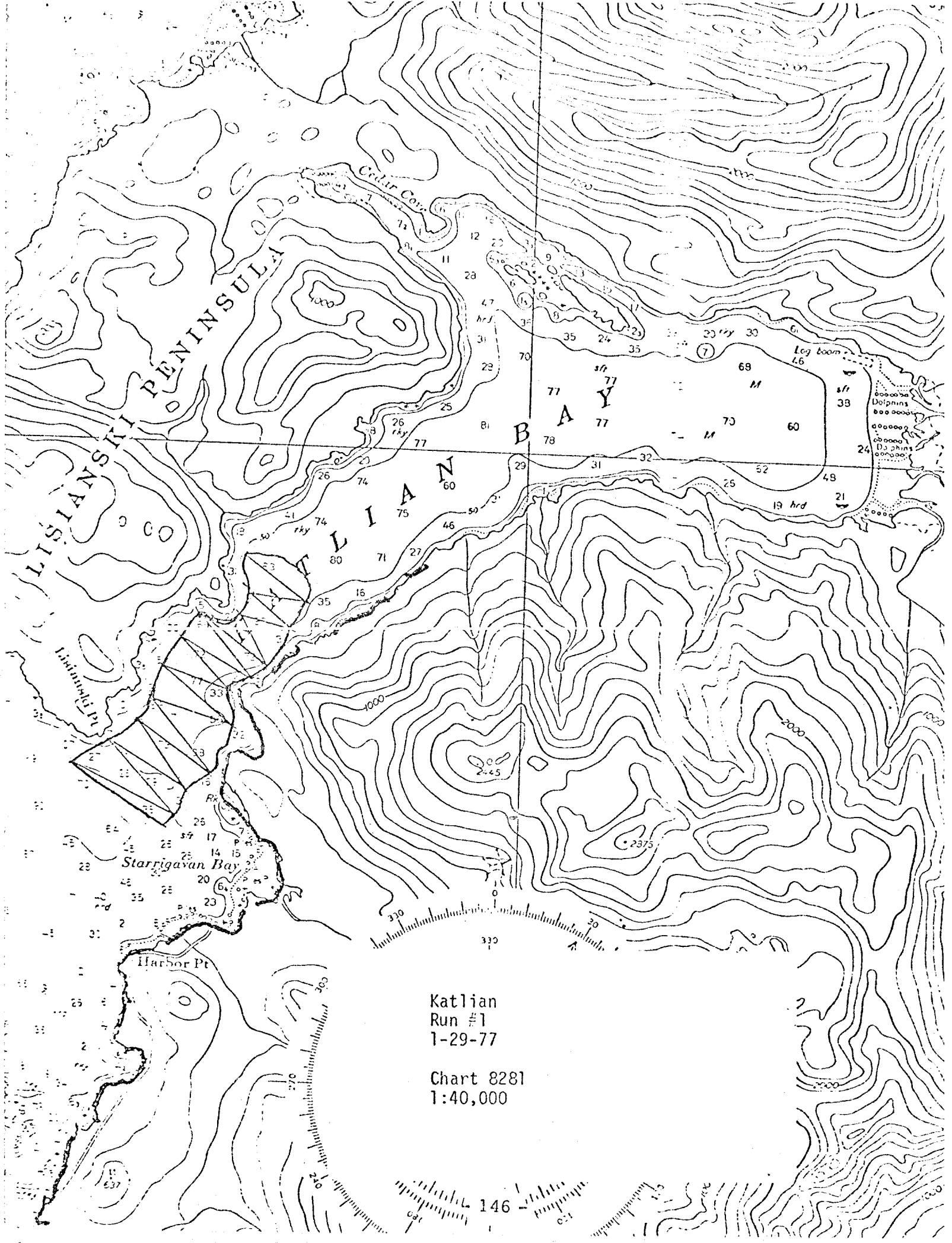
→ Gain

→ Gain

→ Gain

COMMENTS:

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.


LISIANSKI PENINSULA
Cedar Cove
KATLIAN BAY
Log boom
Dolphins
Starrigavan Bay
Harbor Pt
Katlian
Run #1
1-29-77
Chart 8281
1:40,000

ACOUSTICAL SURVEY FORM

AREA Katlian - Nakwasina Run# 1

Date 3-8-77 Vessel KITTIWAKE

Operators Blankenbeckler Tide Stage ebbing

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0074 Gain 4.5

0078 → 0122 4.0

→ ---

→ ---

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0122 @ Gain 4.0

Log time of survey: Start 1918 End 2017 Total 59 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 260 VPP Blk & Shie / 270 VPP Blk & Shie

Tape reversed @ 1044 on tape index

Taping of run ended @ 0865 on tape index

Calibration tone side #2 - Tape index 0868 → 0844 @ Gain 4.0

→ ---

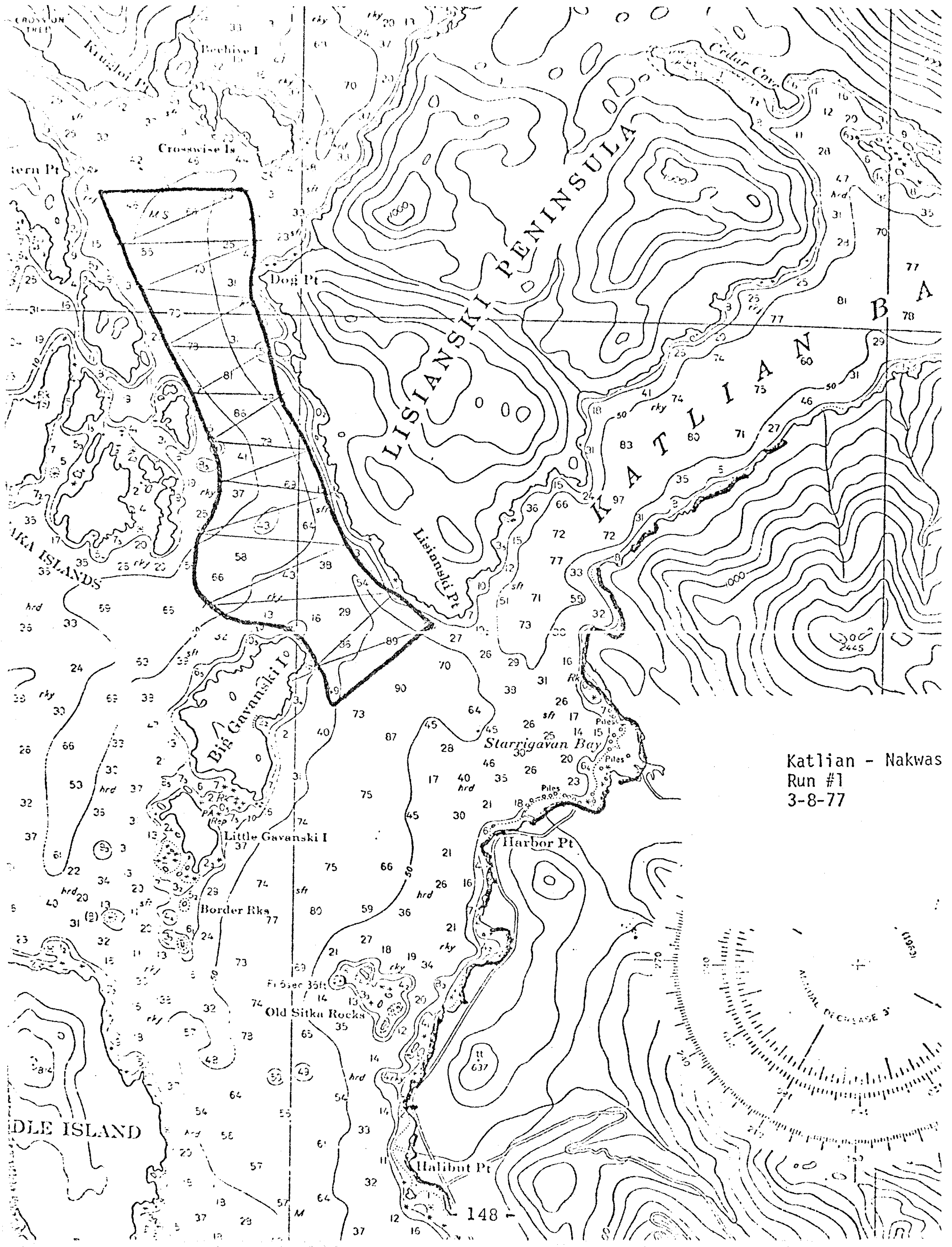
→ ---

→ ---

COMMENTS:

Obviously going to saturate at 4.5, turned down to 4.0 with still some saturation. Schools small, some dense, hit about 15 schools on Wesmar. Fish up and scattered unable to make additional runs. Sea gulls in area. Silver Bay searched. Birds and sea lions only. 1976 herring year class present in harbors.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.



Katlian - Nakwas
Run #1
3-8-77

ACOUSTICAL SURVEY FORM

AREA Katlian - Nakwasina Run # 1

Date 3-9-77 Vessel KITTIWAKE

Operators Blankenbeckler Tide Stage ebbing

GENERAL INFORMATION: Tape index 0000 → 0025

1/ Calibration tone side #1 - Tape index 0025 → 0068 Gain 3.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

TAPING OF DETERMINED SURVEY AREA

Start of fish taping - Tape index 0068 @ Gain 3.0

Log time of survey: Start 1940 End 2035 Total 55 min.

Attenuated @ -12db Pulse length long Tape speed 7.5

Paper speed 4 Input voltage 117 VAC

Calibration osc setting 500 mv Transmit pulse 270 VPP White & S. 260 VPP Black & S.

Tape reversed @ 0968 on tape index

Taping of run ended @ 0682 on tape index

Calibration tone side #2 - Tape index 0682 → 0639 @ Gain 3.0

_____ → _____ _____

_____ → _____ _____

_____ → _____ _____

COMMENTS:

Herring concentrated near Nakwasina more than 3-8-77 run. Six schools with one large school near Dog Point. Last half of survey no fish observed. Visual estimate 3-5 10^6 lbs.

1/ Calibration tone must be recorded with Ross in RUN position. Must have at least one calibration tone on each side of tape reel @ gain determined from herring signals prior to survey. Herring signals must not go over 1.5 VPP to avoid saturation and also must be above hardware noise level.